

CHAPTER 80



ROBOTICS WARFARE SPECIALIST (RW)

NAVPERS 18068F-80A
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NAVY ENLISTED OCCUPATIONAL STANDARD
FOR

ROBOTICS WARFARE SPECIALIST (RW)



SCOPE OF RATING

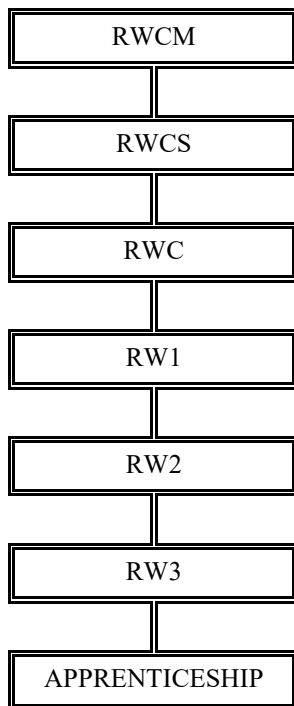
Robotics Warfare Specialists (RW) plan, perform, supervise, and train personnel in the operational employment of Robotic Autonomous Systems (RAS); and plan, perform, supervise, and train personnel in both preventative and corrective levels of maintenance, configuration, testing, troubleshooting, data analysis, utilization of technical documentation, and test equipment.



This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) in Chapter 80.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories will be developed and located in OPNAVINST 1420.1.

For rating entry requirements, refer to NAVADMIN 036/24

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title

Robotics Systems Specialist

Job Code

002822

Job Family

Architecture and Engineering

NOC

TBD

Short Title (30 Characters)

ROBOTICS SYS SPECIALIST

Short Title (14 Characters)

ROBOT SYS SPEC

Pay Plan

Enlisted

Career Field

RW

Other Relationships and Rules

NEC GXXX, EXXX, HXXX, VXXX, 7XXX, and 8XXX series and other NECs as assigned

Job Description

Robotics Systems Specialists serve as operators/maintainers who plan and control the operations of Robotic Autonomous Systems (RAS) during all phases of the mission; perform preventative and corrective maintenance on RAS and Support Equipment (SE); operate and maintain a variety of active and passive payload/sensors; apply a basic knowledge of oceanography, meteorology, bathymetry, aerodynamics, fluid dynamics, power plants, structural components; demonstrate knowledge of radio frequency theory, electrical theory, acoustics, information systems, and networking; employ internal and external communication devices and circuits; analyze data; and perform associated administrative functions.

DoD Relationship

Group Title

Unmanned Vehicle System (UVS) Operators, General

DoD Code

108000

O*NET Relationship

Occupation Title

Robotics Technician

SOC Code

17-3024.01

Job Family

Architecture and Engineering

Skills

Critical Thinking

Judgment and Decision Making

Operation and Control

Systems Analysis

Systems Evaluation

Complex Problem Solving

Management of Material Resources

Monitoring

Equipment Selection

Operation Monitoring

Abilities

Deductive Reasoning

Problem Sensitivity

Information Ordering

Selective Attention

Visualization

Spatial Orientation

Inductive Reasoning

Written Comprehension

Oral Expression

Manual Dexterity

ADMINISTRATION

Paygrade

E4

Task Type

NON-CORE

Task Statements

Comply with naval cryptologic and national security requirements (e.g., physical security, Information Security (INFOSEC), Communication Security (COMSEC), Operational Security (OPSEC), and directives and instructions associated with Secret Compartmented Information (SCI), etc.)

E5

CORE

Draft Robotic and Autonomous Systems (RAS) Casualty Reports (CASREP)

E5

CORE

Draft Robotic and Autonomous Systems (RAS) procedural documents (e.g., Standard Operating Procedures (SOP), Temporary Standing Orders (TSO), Departure from Specifications (DFS), etc.)

E4

CORE

Interpret Robotic and Autonomous Systems (RAS) technical briefs, notices, and bulletins

E4

NON-CORE

Inventory Maintenance Assistance Modules (MAM) (i.e., medium/large Robotic Surface Vehicles (RSV))

E4

CORE

Inventory Robotic and Autonomous Systems (RAS) Communications Security (COMSEC) materials

ADMINISTRATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Inventory Robotic and Autonomous Systems (RAS) controlled equipment (e.g., Night Vision Goggles (NVG); laser designators; Arms, Ammunition, and Explosives (AA&E), etc.)
E4	CORE	Inventory Robotic and Autonomous Systems (RAS) equipment
E5	CORE	Maintain Robotic and Autonomous Systems (RAS) Communications Security (COMSEC) local element documentation
E5	CORE	Maintain Robotic and Autonomous Systems (RAS) configuration control (e.g., software, firmware, patches, etc.)
E5	CORE	Maintain Robotic and Autonomous Systems (RAS) documentation of certifications and training (e.g., currency, proficiency, qualifications, etc.)
E5	CORE	Maintain Robotic and Autonomous Systems (RAS) maintenance program documents
E4	CORE	Report Robotic and Autonomous Systems (RAS) Communications Security (COMSEC) discrepancies
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) inventories of controlled equipment (e.g., Night Vision Goggles (NVG); laser designators; Arms, Ammunition, and Explosives (AA&E), etc.)
E5	CORE	Supervise robotic divisional equipment and system configurations
E5	CORE	Verify Robotic and Autonomous Systems (RAS) equipment inventories

MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Calibrate robotic electromechanical systems
E4	CORE	Configure Robotic and Autonomous Systems (RAS) electrical, electronic, and mechanical calibration equipment
E4	CORE	Configure Robotic and Autonomous Systems (RAS) electronic components and devices
E4	CORE	Configure Robotic and Autonomous Systems (RAS) navigation components
E4	CORE	Configure Robotic and Autonomous Systems (RAS) network components
E4	CORE	Configure robotic communications systems
E4	CORE	Configure robotic vehicle power plant systems (e.g., gas/diesel engine, electrical motor, fuel systems for Robotic Ground Vehicles (RGV), small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E4	CORE	Configure robotic vehicle structural components (e.g., frame, chassis, hydraulic, pneumatic systems for Robotic Ground Vehicles (RGV), small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E4	CORE	Document Robotic and Autonomous Systems (RAS) maintenance actions
E5	CORE	Inspect Robotic and Autonomous Systems (RAS) work areas, tools, and systems equipment (i.e., Quality Assurance (QA) inspection)
E4	CORE	Load Robotic and Autonomous Systems (RAS) image software
E4	CORE	Load robotic Communications Security (COMSEC) systems
E4	CORE	Maintain robotic Communications Security (COMSEC) system components

MAINTENANCE (CONT'D)

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Manage Robotic and Autonomous Systems (RAS) test equipment calibration Programs (e.g., load bearing, tools, scales, etc.)
E4	CORE	Perform corrective maintenance on Robotic and Autonomous Systems (RAS) electrical circuits (e.g., Alternating Current (AC) circuits/Direct Current (DC) circuits, fiber optics, interconnecting cables/circuits, etc.)
E4	CORE	Perform corrective maintenance on Robotic and Autonomous Systems (RAS) electronic components and devices (e.g., Robotic Undersea Vehicles (RUV), Robotic Ground Vehicles (RGV), Robotic Surface Vehicles (RSV), small/medium Robotic Aerial Vehicles (RAV), etc.)
E4	CORE	Perform corrective maintenance on Robotic and Autonomous Systems (RAS) navigation components
E4	CORE	Perform corrective maintenance on Robotic and Autonomous Systems (RAS) network components
E4	CORE	Perform corrective maintenance on Robotic and Autonomous Systems (RAS) structural components (e.g., frame, chassis, hydraulic, pneumatic systems for Robotic Ground Vehicles (RGV), small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E4	CORE	Perform corrective maintenance on robotic communications systems
E4	CORE	Perform corrective maintenance on robotic vehicle power plant systems (e.g., gas/diesel engine, electrical motor, fuel systems for Robotic Ground Vehicles (RGV), Robotic Undersea Vehicles (RUV), small/medium Robotic Aerial Vehicles (RAV), small Robotic Surface Vehicles (RSV), etc.)
E4	NON-CORE	Perform Micro-Miniature (2M) repairs
E4	CORE	Perform preventative maintenance on Robotic and Autonomous Systems (RAS) electrical circuits (e.g., Alternating Current (AC) circuits/Direct Current (DC) circuits, fiber optics, interconnecting cables/circuits, etc.)
E4	CORE	Perform preventative maintenance on Robotic and Autonomous Systems (RAS) electronic components and devices
E4	CORE	Perform preventative maintenance on Robotic and Autonomous Systems (RAS) navigation components
E4	CORE	Perform preventative maintenance on Robotic and Autonomous Systems (RAS) network components
E4	CORE	Perform preventative maintenance on Robotic and Autonomous Systems (RAS) structural components (e.g., frame, chassis, hydraulics, pneumatic systems, etc.)
E4	CORE	Perform preventative maintenance on robotic communications systems
E4	CORE	Perform preventative maintenance on robotic electromechanical systems
E4	CORE	Perform preventative maintenance on robotic vehicle power plant systems (e.g., gas/diesel engines, electrical motors, fuel systems, etc.)
E4	CORE	Perform Robotic and Autonomous Systems (RAS) pre- and post-operational inspections
E4	CORE	Set up Robotic and Autonomous Systems (RAS) electrical circuits (e.g., Alternating Current (AC) circuits/Direct Current (DC) circuits, fiber optics, interconnecting cables/circuits, etc.)
E5	NON-CORE	Supervise Maintenance Assistance Modules (MAM) usage (i.e., medium/large Robotic Surface Vehicles (RSV))

MAINTENANCE (CONT'D)

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) equipment installations, Testing, and alterations
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) work center maintenance Operations
E4	CORE	Test Robotic and Autonomous Systems (RAS) analog and digital General Purpose Electronic Test Equipment (GPETE)
E4	CORE	Test Robotic and Autonomous Systems (RAS) electrical circuits (e.g., Alternating Current (AC) circuits/Direct Current (DC) circuits, fiber optics, interconnecting cables/circuits, etc.)
E4	CORE	Test Robotic and Autonomous Systems (RAS) electrical, electronic, and mechanical calibration equipment
E4	CORE	Test Robotic and Autonomous Systems (RAS) electronic components and devices
E4	CORE	Test Robotic and Autonomous Systems (RAS) navigation components
E4	CORE	Test Robotic and Autonomous Systems (RAS) network components
E4	CORE	Test Robotic and Autonomous Systems (RAS) Special Purpose Electronic Test Equipment (SPETE)
E4	CORE	Test robotic communications systems
E4	CORE	Test robotic electromechanical systems
E4	CORE	Test robotic vehicle power plant systems (e.g., gas/diesel engines, electrical motors, fuel systems, etc.)
E4	CORE	Test robotic vehicle structural components (e.g., frame, chassis, hydraulics, Pneumatic systems, etc.)
E4	CORE	Troubleshoot Robotic and Autonomous Systems (RAS) electrical circuits (e.g., Alternating Current (AC) circuits/Direct Current (DC) circuits, fiber optics, interconnecting cables/circuits, etc.)
E4	CORE	Troubleshoot Robotic and Autonomous Systems (RAS) electronic components and devices
E4	CORE	Troubleshoot Robotic and Autonomous Systems (RAS) navigation components
E4	CORE	Troubleshoot Robotic and Autonomous Systems (RAS) network components
E4	CORE	Troubleshoot Robotic and Autonomous Systems (RAS) structural components (e.g., frame, chassis, hydraulic, pneumatic systems for Robotic Ground Vehicles (RGV), small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E4	CORE	Troubleshoot robotic Communications Security (COMSEC) system components
E4	CORE	Troubleshoot robotic communications systems
E4	CORE	Troubleshoot robotic electromechanical systems
E4	CORE	Troubleshoot robotic vehicle power plant systems (e.g., gas/diesel engine, electrical motor, fuel systems for Robotic Ground Vehicles (RGV), Robotic Undersea Vehicles (RUV), small/medium Robotic Aerial Vehicles (RAV), small Robotic Surface Vehicles (RSV), etc.)

MISSION PLANNING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze environmental effects on Robotic and Autonomous Systems (RAS) sensors and weapons
E4	CORE	Analyze robotic vehicle weight and balance calculations
E4	CORE	Assess Robotic and Autonomous Systems (RAS) operating constraints (e.g., terrain, depth, altitude, distance limitations, etc.)
E5	CORE	Brief Robotic and Autonomous Systems (RAS) mission plans
E4	CORE	Calculate robotic vehicle fuel cell consumption (e.g., vehicle energy power sources for Robotic Undersea Vehicles (RUV), Robotic Surface Vehicles (RSV), small/medium Robotic Aerial Vehicles (RAV), etc.)
E4	CORE	Configure robotic vehicle hardware (e.g., sensor integration, weight and balance, payload control modules, etc.)
E4	CORE	Configure robotic vehicle software for operations (e.g., autonomy, payloads, patches/updates, etc.)
E5	CORE	Coordinate with airfield/port operations
E5	CORE	Develop Robotic and Autonomous Systems (RAS) mission plans
E4	CORE	Employ Tactical Decision Aid (TDA) to forecast Robotic and Autonomous Systems (RAS) sensor effectiveness
E5	CORE	Integrate forecasts and recommendations into Robotic and Autonomous Systems (RAS) mission plans
E4	CORE	Locate Robotic and Autonomous Systems (RAS) satellite assets
E4	CORE	Perform Robotic and Autonomous Systems (RAS) pre-mission checks
E5	CORE	Plan Robotic and Autonomous Systems (RAS) map or chart annotations (e.g., exclusion zones, Points of Interest (POI), Notice to Mariners (NOTM), etc.)
E4	CORE	Prepare Robotic and Autonomous Systems (RAS) mission plans (e.g., Robotic Undersea Vehicles (RUV), Robotic Surface Vehicles (RSV), small/medium Robotic Aerial Vehicles (RAV), etc.)
E4	CORE	Update Robotic and Autonomous Systems (RAS) navigational charts (e.g., National Oceanic Atmospheric Administration (NOAA), National Geospatial Agency (NGA), Notice to Mariners (NOTM), etc.)
E5	CORE	Validate Robotic and Autonomous Systems (RAS) mission plans
E5	CORE	Validate robotic vehicle readiness and configurations (e.g., hardware, software, pre-mission check, log book review, payloads, etc.)

POST MISSION ANALYSIS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Archive Robotic and Autonomous Systems (RAS) data (e.g., log file, mission file, sensor, etc.)
E4	CORE	Disseminate Robotic and Autonomous Systems (RAS) reports (e.g., Acoustic Intelligence (ACINT), Post Mission Data (PMD), asset positions, Image Intelligence (IMINT), etc.)
E4	CORE	Download Robotic and Autonomous Systems (RAS) data (e.g., log file, mission file, sensor, etc.)
E4	CORE	Generate Robotic and Autonomous Systems (RAS) reports (e.g., Acoustic Intelligence (ACINT), Post Mission Data (PMD), asset positions, Image Intelligence (IMINT), etc.)

POST MISSION ANALYSIS (CONT'D)

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Process Robotic and Autonomous Systems (RAS) data (e.g., log file, mission file, sensor, etc.)
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) data processing (e.g., log file, mission file, sensor data, etc.)

SONAR OPERATIONS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct Robotic and Autonomous Systems (RAS) sensor operator proficiency training
E4	CORE	Correlate contacts using multiple Robotic and Autonomous Systems (RAS) sensors (e.g., side-scan sonar, multi camera, Signal Intelligence (SIGINT), etc.)
E4	CORE	Correlate Robotic and Autonomous Systems (RAS) multi-sensor data (e.g., side-scan sonar, multi camera, Signal Intelligence (SIGINT), etc.)
E4	CORE	Detect contacts using Robotic and Autonomous Systems (RAS) passive payloads/sensors
E4	CORE	Employ robotic payload/sensor systems
E4	CORE	Report real-time Robotic and Autonomous Systems (RAS) sensor contacts
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) sensor operations

VEHICLE OPERATIONS

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct launch/recovery of Robotic and Autonomous Systems (RAS) auxiliary equipment (e.g., support equipment, transponders, Gateway Buoy (GWB), Open Water Transport System (OWTS), etc.)
E4	CORE	Employ robotic auxiliary systems (e.g., support equipment, transponders, Gateway Buoy (GWB), Open Water Transport System (OWTS), etc.)
E4	CORE	Employ robotic Command and Control (C2) systems (e.g., data link, acoustic communications, Radio Frequency (RF), etc.)
E4	CORE	Employ robotic electrical/electronic systems
E4	CORE	Employ robotic fuel/cell systems
E4	CORE	Employ robotic navigation systems
E4	CORE	Employ robotic perception systems (e.g., Light Detection and Ranging (LIDAR), Sound Navigation and Ranging (SONAR), Radio Detection and Ranging (RADAR), etc.)
E5	CORE	Manage robotic single-vehicle operations
E4	CORE	Monitor Robotic and Autonomous Systems (RAS) performance (e.g., vehicle, control station, auxiliary equipment, etc.)
E4	CORE	Perform Robotic and Autonomous Systems (RAS) coordination and reconnaissance operations (i.e., Surface Coordination and Reconnaissance [SCAR])
E4	CORE	Perform Robotic and Autonomous Systems (RAS) Intelligence, Surveillance, and Reconnaissance (ISR) operations (e.g., Pattern of Life (POL), Battle Damage Assessment (BDA), Intelligence Preparation of the Operational Environment (IPOE), etc.)
E4	CORE	Perform robotic vehicle launch and recovery operations (e.g., Robotic Aerial Vehicles (RAV), Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)

VEHICLE OPERATIONS (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Pilot robotic vehicles (e.g., Robotic Ground Vehicles (RGV), Robotic Undersea Vehicles (RUV), Robotic Surface Vehicles (RSV), small/medium Robotic Aerial Vehicles (RAV), etc.)
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) configurations (e.g., modules, payloads, sensors for Robotic Aerial Vehicles (RAV), Robotic Undersea Vehicles (RUV), Robotic Surface Vehicles (RSV), etc.)
E5	CORE	Supervise Robotic and Autonomous Systems (RAS) missions (e.g., Robotic Surface Vehicles (RSV), Robotic Undersea Vehicles (RUV), small/medium Robotic Aerial Vehicles (RAV), etc.)
E5	CORE	Supervise robotic vehicle launches/recoveries (e.g., small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E4	NON-CORE	Support small boat evolutions
E4	CORE	Update Robotic and Autonomous Systems (RAS) parameters

Job Title**Robotics Systems Manager****Job Code****002823****Job Family**
Management**NOC**
TBD**Short Title (30 Characters)**
ROBOTICS SYS MANAGER**Short Title (14 Characters)**
ROBOT SYS MGR**Pay Plan**
Enlisted**Career Field**
RW**Other Relationships and Rules**
NEC GXXX, HXXX, 7XXX, and 8XXX series and other NECs as assigned**Job Description**

Robotic Systems Managers supervise and train personnel who serve as Robotics Systems Specialist maintainers/operators in the planning and control of Robotic Autonomous Systems (RAS) operations during all phases of the mission; manage preventative and corrective maintenance on RAS and Support Equipment (SE); supervise the operation and maintenance of a variety of active and passive payload/sensors; supervise the application of basic knowledge in oceanography, meteorology, bathymetry, aerodynamics, fluid dynamics, power plants, structural components and the demonstration of knowledge in radio frequency theory, electrical theory, acoustics, information systems, and networking; validate analysis of data; and perform and oversee associated administrative functions.

DoD Relationship

<u>Group Title</u>	<u>DoD Code</u>
ADP Computers, General	11500

O*NET Relationship

<u>Occupation Title</u>	<u>SOC Code</u>	<u>Job Family</u>
Computer and Information Systems Managers	11-3021.00	Management

Skills

Critical Thinking
 Coordination
 Judgment and Decision Making
 Management of Material Resources
 Time Management
 Writing
 Complex Problem Solving
 Operation and Control
 Reading Comprehension
 Systems Analysis

Abilities

Information Ordering
 Visualization
 Inductive Reasoning
 Written Expression
 Problem Sensitivity
 Written Comprehension
 Spatial Orientation
 Speed of Closure
 Category Flexibility
 Oral Expression

ADMINISTRATION

<u>Pavgrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Coordinate Robotic and Autonomous Systems (RAS) deployment loadouts
E7	CORE	Coordinate Robotic and Autonomous Systems (RAS) pre-deployment work-ups
E7	CORE	Develop Robotic and Autonomous Systems (RAS) After Action Reports (AAR)
E6	CORE	Develop Robotic and Autonomous Systems (RAS) Emergency Action Plans (EAP) and Emergency Destruction Plans (EDP)
E7	CORE	Develop Robotic and Autonomous Systems (RAS) platform-specific training requirements/plans
E7	CORE	Manage equipment Casualty Reporting (CASREP) process
E6	CORE	Manage Robotic and Autonomous Systems (RAS) controlled equipment program (e.g., Night Vision Goggles (NVG); laser designators; Arms, Ammunition, and Explosives (AA&E), etc.)
E6	CORE	Manage Robotic and Autonomous Systems (RAS) deployment loadouts
E6	CORE	Manage Robotic and Autonomous Systems (RAS) equipment certifications and recertifications
E6	CORE	Manage Robotic and Autonomous Systems (RAS) maintenance program
E6	CORE	Manage Robotic and Autonomous Systems (RAS) pre-deployment work-ups
E6	CORE	Manage robotic divisional equipment and system configurations

ADMINISTRATION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Review Robotic and Autonomous Systems (RAS) procedural documents (e.g., Standard Operating Procedures (SOP), Temporary Standing Orders (TSO), Departure from Specifications (DFS), etc.)
E7	CORE	Validate Robotic and Autonomous Systems (RAS) procedural documents (e.g., Standard Operating Procedures (SOP), Temporary Standing Orders (TSO), Departure from Specifications (DFS), etc.)

MISSION PLANNING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Approve Robotic and Autonomous Systems (RAS) mission plans (e.g., small/medium Robotic Aerial Vehicles (RAV)/Robotic Undersea Vehicles (RUV), small Robotic Surface Vehicles (RSV), etc.)
E6	CORE	Coordinate Robotic and Autonomous Systems (RAS) operational space and deconfliction with governing authority (e.g., Watch floor, Air Traffic Control (ATC), Range Control, etc.)
E6	CORE	Develop Robotic and Autonomous Systems (RAS) Communications Plan (CP)
E6	CORE	Plan Robotic and Autonomous Systems (RAS) Intelligence, Surveillance, and Reconnaissance (ISR) operations
E6	CORE	Plan Robotic and Autonomous Systems (RAS) Surface Coordination and Reconnaissance (SCAR) operations
E6	NON-CORE	Plan small/medium Robotic Aerial Vehicles (RAV) flight operations
E6	CORE	Validate environmental forecast effects on robotic vehicle sensors and weapons
E6	CORE	Validate robotic vehicle weight and balance (i.e., stability)

POST MISSION ANALYSIS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Validate Robotic and Autonomous Systems (RAS) data (e.g., log file, mission file, sensor, etc.)
E6	CORE	Validate Robotic and Autonomous Systems (RAS) reports (e.g., Acoustic Intelligence (ACINT), Post Mission Data (PMD), asset positions, Image Intelligence (IMINT), etc.)

SENSOR OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	NON-CORE	Employ leave-behind or deliverable effects (e.g., active, kinetic, Psychological Operations (PSYOP), tagging for Robotic Undersea Vehicles (RUV), small/medium Robotic Aerial Vehicles (RAV), small Robotic Surface Vehicles (RSV), etc.)
E6	CORE	Manage Robotic and Autonomous Systems (RAS) sensor operations
E7	CORE	Provide recommendations for Robotic and Autonomous Systems (RAS) payload/sensor employment

VEHICLE OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Conduct Robotic and Autonomous Systems (RAS) Battlespace Management System (BMS) operations
E7	CORE	Coordinate robotic vehicle operations
E6	CORE	Manage robotic multi-vehicle operations (e.g., Robotic Undersea Vehicles (RUV), Robotic Surface Vehicles (RSV), small/medium Robotic Aerial Vehicles (RAV), etc.)