

CHAPTER 17



CONSTRUCTION ELECTRICIAN (CE)

NAVPERS 18068-17E
CH-65

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

CONSTRUCTION ELECTRICIAN (CE)



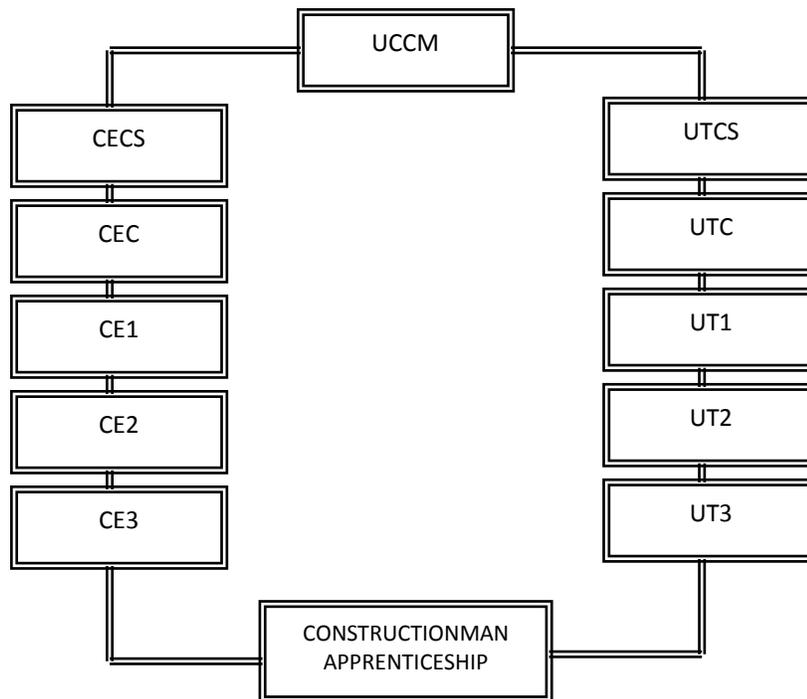
SCOPE OF RATING

Construction Electricians (CE) install and repair interior/exterior wiring and overhead and underground primary and secondary distribution systems using conduit, raceways, and direct burial cable; set up, operate, and service power generation electrical equipment; climb poles and towers utilizing lineman equipment; install and service electrical equipment; maintain individual combat readiness, and perform tasks required in combat and disaster preparedness or recovery operations.

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) as Chapter 17.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

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**Construction Electricians****Job Code****002599****Job Family**

Installation, Maintenance, and Repair

NOC

TBD

Short Title (30 Characters)

CONSTRUCTION ELECTRICIAN

Short Title (14 Characters)

CONSTRUCT ELEC

Pay Plan

Enlisted

Career Field

CE

Other Relationships and Rules

All NEC's listed as the Rating Source.

Job Description

Construction Electricians interpret electrical plans and specifications, install and repair interior/exterior wiring and overhead and underground primary and secondary distribution systems using conduit, raceways, and direct burial cable; setup, operate, and service electrical equipment; climb poles and towers utilizing lineman equipment; install and service electrical equipment (i.e., transformers, switching equipment, protective devices, motors and controllers, electrical systems, portable generators and distribution systems, telephone/communication systems, security and portable lighting systems); As project managers, CEs plan, staff, direct, and control multiple construction projects to include problem solving, planning, estimating, scheduling, cost control and personnel management, ensuring compliance with specifications, code requirements, plans, and contracts; prepare progress reports, time records, construction schedules, and material, labor, tool and equipment estimates for construction projects and act as project supervisors and trainers for junior personnel.

DoD RelationshipGroup Title

Electricians

DoD Code

172100

O*NET RelationshipOccupation TitleElectrical Power-Line Installers
and RepairersSOC Code

49-9051.00

Job FamilyInstallation, Maintenance, and
Repair**Skills***Critical Thinking**Equipment Selection**Installation**Troubleshooting**Operation and Control**Equipment Maintenance**Quality Control Analysis**Complex Problem Solving**Management of Personnel Resources**Repairing***Abilities***Deductive Reasoning**Manual Dexterity**Information Ordering**Multi-limb Coordination**Problem Sensitivity**Control Precision**Oral Expression**Fluency of Ideas**Mathematical Reasoning**Reaction Time***CONSTRUCTION MANAGEMENT****Paygrade****Task Type****Task Statements**

E6	CORE	Conduct three-phase quality control inspections
E4	CORE	Develop construction activity estimates
E5	CORE	Develop construction environmental protection plans
E5	CORE	Develop construction project packages
E5	CORE	Develop construction safety plans
E4	CORE	Develop construction sketches and diagrams
E5	CORE	Develop project three-phase quality control plans
E5	CORE	Establish construction site layouts
E4	CORE	Inspect construction materials
E6	CORE	Inspect construction projects
E4	NON-CORE	Interpret construction drawings and specifications
E4	CORE	Inventory project tools and materials
E5	CORE	Lead construction projects
E5	CORE	Maintain construction project resources
E5	CORE	Maintain facilities

E7	NON-CORE	Manage camp maintenance operations
E7	CORE	Manage construction environmental protection programs
E6	CORE	Manage construction project resources
E7	CORE	Manage construction projects
E7	CORE	Manage construction safety programs
E7	CORE	Manage facilities maintenance programs
E6	NON-CORE	Manage maintenance contracts
E7	CORE	Manage project quality control programs
E7	CORE	Manage three-phase quality control programs
E6	NON-CORE	Monitor construction project contracts
E5	CORE	Supervise construction project safety operations
E6	CORE	Supervise construction projects
E6	CORE	Supervise construction safety operations
E6	CORE	Supervise environmental protection programs
E6	CORE	Supervise facilities maintenance programs
E6	CORE	Supervise planning and estimating operations
E5	CORE	Supervise project three-phase quality control programs
E5	CORE	Turnover construction projects
E5	NON-CORE	Validate project surveys and elevation data

ELECTRICAL AND ELECTRONIC SYSTEM COMPONENTS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Install electrical components and devices
E4	CORE	Install electronic components and devices
E4	CORE	Repair electrical equipment
E5	CORE	Repair electronic components and devices
E4	CORE	Test electrical equipment
E5	CORE	Test electronic components and devices
E4	CORE	Troubleshoot electrical equipment
E5	CORE	Troubleshoot electronic components and devices

INTERIOR AND EXTERIOR WIRING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Calculate electrical load capacities for conductors
E5	CORE	Calculate electrical load requirements
E5	CORE	Calculate fill capacities for raceways and enclosures
E4	CORE	Install electrical conductors
E4	CORE	Install electrical conduits and raceways
E4	CORE	Install electrical fixtures and devices
E4	CORE	Install electrical power panels and enclosures
E4	CORE	Install interior/exterior electrical grounding and bonding systems
E4	CORE	Install service entrance equipment

E4	CORE	Interpret drawings, specifications, and diagrams
E4	CORE	Repair interior and exterior wiring systems
E4	CORE	Troubleshoot interior and exterior wiring systems

LIGHTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Calculate area lighting requirements
E5	NON-CORE	Install airfield lighting systems
E4	CORE	Install area lighting systems
E4	CORE	Install portable lighting
E5	CORE	Install street lighting systems
E4	CORE	Install temporary lighting systems
E5	NON-CORE	Maintain airfield lighting systems
E4	CORE	Maintain lighting systems (e.g. area, commercial, emergency, security, industrial)
E4	CORE	Maintain portable lighting
E5	CORE	Maintain street lighting systems
E4	CORE	Maintain temporary lighting systems
E5	NON-CORE	Repair airfield lighting systems
E5	CORE	Repair lighting systems (e.g. area, commercial, emergency, security, industrial)
E4	CORE	Repair portable lighting
E5	CORE	Repair street lighting systems
E4	CORE	Repair temporary lighting systems
E5	NON-CORE	Test airfield lighting systems
E4	CORE	Test lighting systems (e.g. area, commercial, emergency, security, industrial)
E5	CORE	Test street lighting systems
E5	NON-CORE	Troubleshoot airfield lighting systems
E5	CORE	Troubleshoot lighting systems (e.g. area, commercial, emergency, security, industrial)
E5	CORE	Troubleshoot street lighting systems

MOTORS AND CONTROLLERS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Calculate motor and control requirements
E4	CORE	Install electric motors
E4	CORE	Install motor control and protective devices
E4	CORE	Maintain electrical motor systems
E5	CORE	Repair motor control and protective devices
E4	CORE	Test electric motors
E4	CORE	Test motor control and protective devices
E5	CORE	Troubleshoot electric motors
E5	CORE	Troubleshoot motor control and protective devices

POWER DISTRIBUTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Calculate power distribution load requirements
E4	CORE	Climb utility poles
E5	CORE	Construct electrical manholes
E5	CORE	Develop power distribution system requirements
E5	CORE	Install maintenance grounding systems
E4	CORE	Install overhead power distribution systems
E4	CORE	Install power distribution grounding systems
E4	CORE	Install power distribution protection system components
E5	CORE	Install power distribution switch gear
E5	CORE	Install power distribution transformers
E4	CORE	Install service drops
E4	CORE	Install underground power distribution systems
E5	CORE	Locate underground electrical utilities
E5	CORE	Maintain overhead power distribution systems
E5	CORE	Maintain power distribution switch gear
E4	CORE	Maintain power distribution transformers
E5	CORE	Maintain underground power distribution systems
E5	CORE	Operate auger truck
E5	CORE	Operate bucket trucks
E4	CORE	Operate power distribution switch gear
E4	CORE	Perform pole-top rescues
E5	CORE	Repair direct burial cables
E5	CORE	Repair overhead power distribution systems
E5	CORE	Repair power distribution switch gear
E5	CORE	Repair underground power distribution systems
E4	CORE	Test power distribution grounding systems

POWER GENERATION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Calculate power generation load requirements
E4	CORE	Install alternative power sources (e.g. solar, wind)
E4	CORE	Install power generation systems
E4	CORE	Maintain alternative power sources (e.g. solar, wind)
E4	CORE	Maintain power generation systems
E4	CORE	Operate power generation systems
E5	CORE	Repair alternative power sources (e.g. solar, wind)
E5	CORE	Repair power generation systems
E5	CORE	Troubleshoot power generation systems

SEABEE COMMON CORE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Apply combat life saving techniques
E4	CORE	Conduct Chemical, Biological, Radiological and Nuclear Explosive (CBRNE) defensive operations
E4	CORE	Conduct convoy operations
E4	CORE	Conduct Disaster Recovery Operations (DRO)
E4	CORE	Conduct embarkation and debarkation operations
E6	NON-CORE	Conduct Maritime Prepositioning Force (MPF) operations
E4	CORE	Conduct personal protection and decontamination operations
E4	CORE	Employ Advance Base Functional Component (ABFC) systems
E4	CORE	Employ grenades, mines, and pyrotechnics
E4	CORE	Employ land survival techniques
E4	NON-CORE	Maintain crew-served weapons
E4	CORE	Maintain field communications equipment
E4	CORE	Maintain Personal Gear Issue (PGI)
E4	CORE	Maintain small arms
E4	NON-CORE	Operate crew-served weapons
E4	CORE	Operate field communications equipment
E4	CORE	Operate small arms
E4	CORE	Patrol assigned areas
E7	CORE	Perform command and control of a company
E4	CORE	Perform command and control of a fire team
E6	CORE	Perform command and control of a platoon
E5	CORE	Perform command and control of a squad
E7	NON-CORE	Plan convoy operations
E4	CORE	Repair damaged airfields
E4	CORE	Set tactical defenses
E7	NON-CORE	Supervise Airfield Damage Repair (ADR) operations

UNDERWATER CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct oceanographic surveys
E5	NON-CORE	Maintain diving equipment
E5	NON-CORE	Maintain diving support equipment
E7	NON-CORE	Manage demolition operations
E7	NON-CORE	Manage diving emergency procedures
E7	NON-CORE	Manage diving equipment maintenance
E7	NON-CORE	Manage diving support equipment maintenance
E7	NON-CORE	Manage light salvage operations
E7	NON-CORE	Manage Maritime Prepositioning Force (MPF) pre-offload operations

E7	NON-CORE	Manage Naval Sea Systems Command (NAVSEA) system certification programs
E7	NON-CORE	Manage oceanographic surveys
E7	NON-CORE	Manage Offshore Petroleum Distribution System (OPDS) operations
E7	NON-CORE	Manage Remote Operated Vehicle (ROV) operations
E7	NON-CORE	Manage small craft operations
E7	NON-CORE	Manage underwater construction operations
E5	NON-CORE	Perform coxswain duties
E5	NON-CORE	Perform demolition operations
E5	NON-CORE	Perform diving emergency procedures
E5	NON-CORE	Perform diving operations
E5	NON-CORE	Perform light salvage operations
E5	NON-CORE	Perform Maritime Prepositioning Force (MPF) pre-offload operations
E5	NON-CORE	Perform Offshore Petroleum Distribution System (OPDS) operations
E5	NON-CORE	Perform Remote Operated Vehicle (ROV) operations
E5	NON-CORE	Perform small craft operations
E5	NON-CORE	Perform underwater construction operations
E6	NON-CORE	Supervise demolition operations
E6	NON-CORE	Supervise diving emergency procedures
E6	NON-CORE	Supervise diving equipment maintenance
E6	NON-CORE	Supervise diving operations
E6	NON-CORE	Supervise diving support equipment maintenance
E6	NON-CORE	Supervise light salvage operations
E6	NON-CORE	Supervise Maritime Prepositioning Force (MPF) pre-offload operations
E6	NON-CORE	Supervise Naval Sea Systems Command (NAVSEA) system certification program
E6	NON-CORE	Supervise oceanographic surveys
E6	NON-CORE	Supervise Offshore Petroleum Distribution System (OPDS) operations
E6	NON-CORE	Supervise Remote Operated Vehicle (ROV) operations
E6	NON-CORE	Supervise small craft operations
E6	NON-CORE	Supervise underwater construction operations