

Gas Turbine Systems Technician (Electrical) (GSE)



GSEs operate, repair and perform organizational and intermediate maintenance on electrical components of gas turbine engines, main propulsion machinery, auxiliary equipment, propulsion control systems, and assigned electrical and electronic circuitry up to the printed circuit and alarm warning circuitry.

What They Do

The duties performed by GSEs include:

- operating electric plant main and propulsion control equipment;
- locating circuit failures and replacing parts;
- measuring current, voltage and resistance;
- testing for shorts, grounds and continuity;
- testing protective circuitry;
- testing, servicing and replacing batteries;
- performing preventive maintenance on digital data equipment and control and monitoring circuits;
- measuring insulation resistance;
- repairing electrical/electronic cables, wiring and connectors;
- maintaining alarm, indicating and warning systems;
- maintaining and repairing gas turbine engines and auxiliary equipment;
- working with blueprints, schematics and charts;
- performing administrative procedures related to gas turbine propulsion system operation and maintenance;
- performing work area inspections;
- operating standard test equipment;
- stopping engines and checking for proper performance;
- replacing and adjusting operating tolerance of contacts, microswitches, relay switches, pressure switches and temperature switches.

Credit Recommendations

The American Council on Education recommends that semester hour credits be awarded in the vocational certificate and lower-division bachelor's/associate's degree categories for courses taken in this rating on technical mathematics, applied physics, gas turbines, basic AC/DC theory and blueprint reading.

Qualifications and Interests

Personnel in this rating must have mechanical ability, manual dexterity and normal color perception. They should also have experience working with machines, in electronics/electrical fields and have had some courses in physics.

Working Environment

Gas turbine systems technicians usually work in engine rooms or shops that may be hot and noisy aboard many types of modern ships. At shore they may work at major repair or training facilities. Work is physical and analytical (trouble-shooting) for electronic components.

Career Path After Recruit Training

Enlistees are taught the fundamentals of this rating through formal Navy schooling. Advanced technical and operational training is available in this rating during later stages of career development. Temporary assignments to general duty, sometimes aboard ship, may be required while awaiting advanced training assignment.

School	Present Location	Approximate Training Time	Subjects	Training Methods
Basic Engineering Common Core	Great Lakes, Ill.	9 Weeks	Introduction to technical documentation, basic mechanical theory, safety precautions and programs, alignment and operation of piping systems and equipment, hand tools, precision instruments, lubricants, bearings, couplings, gears, valves, pumps and the Maintenance Material Management System (3M)	Self paced Group instruction and practical application
GSE Strand Technical School	Great Lakes, Ill.	6 weeks	Introduction to technical documentation, basic watch standing procedures, alignment and operation of piping systems and equipment, hand tools, precision instruments, lubricants and lubricating systems, bearings, couplings, gears, valves, the Maintenance Material Management System (3M), gas turbine engine theory, propulsion theory, digital logic control system, electromechanical and electrohydraulic servo devices, electrical power and generative distribution CPR, electrical math, basic schematics, AC/DC circuits, solid state characteristics, logic systems	Self paced Group instruction and practical application

During a 20-year period in the Navy, GSE spend about 65 percent of their time assigned to fleet units and 35 percent to shore stations.

Opportunities

Opportunities for placement in this rating are excellent. Approximately 1,200 men and women work in this rating.

O*Net SOC Code O*Net SOC Title

- 17-3023.00 Electrical and Electronic Engineering Technicians
- 47-2111.00 Electricians
- 49-1011.00 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers
- 49-2092.00 Electric Motor, Power Tool, and Related Repairers
- 49-2093.00 Electrical and Electronics Installers and Repairers, Transportation Equipment

- 49-2094.00 Electrical and Electronics Repairers, Commercial and Industrial Equipment
- 49-2095.00 Electrical and Electronics Repairers, Powerhouse, Substation, and Relay
- 49-2096.00 Electronic Equipment Installers and Repairers, Motor Vehicles
- 49-9012.00 Control and Valve Installers and Repairers, Except Mechanical Door

Since Navy programs and courses are revised at times, the information contained on this rating card is subject to change.

(Revised 01/08)