



AE – Aviation Electrician’s Mate

Aviation Electrician’s Mate maintain electrical and instrument systems, including power generation, conversion, and distribution systems; aircraft batteries; interior and exterior lighting; electrical control of aircraft systems, including hydraulic, landing gear, flight control, utility, and power plant engine, flight and non-instrument-type indicating and warning systems; automatic flight control and stabilization systems; aircraft compass systems; attitude reference systems; and inertial navigation systems. Most of these technicians are trained in computers to support state-of-the-art equipment or on power generators and power distribution systems to support aircraft electrical systems.

What They Do

AE sailors attend common basic electronics training, after which they attend the Aviation Electrician (AE) rating “A” School.

The AE sailor will troubleshoot and repair some of the following complex electronic systems, employing the latest test equipment and procedures:

- digital computers
- fiber optics
- infrared detection
- radar systems
- electricity generation systems
- laser electronics
- navigation systems
- communications equipment
- electrical power distribution
- pressure indication systems
- electric transformers and circuits
- Testing aircraft instruments and systems such as automatic flight controls, inertial navigation, and compass systems;
- Performing micro-miniature module repair on computer circuit cards;
- Using a variety of electrical measuring and diagnostic equipment;
- Reading electrical system diagrams;
- Repairing and maintaining power generators and electric motors.

Working Environment

Sailors in this career field will perform duties at sea and ashore around the world. At various times they could be working at a land-based aircraft squadron or onboard an aircraft carrier, either indoors or outdoors, in a shop environment or in office surroundings, and at a clean lab bench or in a garage-type situation. They work closely with others, require little supervision, and do mental and physical work of a technical nature.

Opportunities

Opportunities for placement in this career field are excellent for qualified personnel. About 13,000 men and women now work in this field.

Qualifications and Interests

Personnel in this field must be U.S. citizens eligible for a security clearance. Applicants in this career field will work on some of the most technologically advanced aircraft in the Navy. Applicants should have an interest in aviation and working with or around aircraft. They should have a high degree of manual dexterity with tools, equipment, and machines for detailed precision work. They should have a strong interest in electrical or computer systems and be ready to tackle a tough academic curriculum in electronics training. They should have a desire to be resourceful parts of a team effort. Helpful attributes include arithmetic knowledge, writing ability, speaking skills, good memory, and physical fitness.

Normal hearing and color perception is required for this rating.

Career Path After Recruit Training

Enlistees are taught the fundamentals of this rating through on-the-job training or formal Navy schooling. Additional training for specific aircraft or equipment is generally received before reporting to operational activities. Advanced technical and specific operational training is available in this rating during later stages of career development.

School	Present Location	Approximate Training Time	Subjects	Training Methods
Class “A” Technical School	Pensacola, FL	15 Weeks	Aviation basic theory and basic technical knowledge, aviation electrical systems, skills of electricity, and electronics theory.	Group Instruction

School assignments vary with individuals. AE technicians may be assigned to naval air stations, squadrons, aircraft carriers or other aviation facilities in the United States or overseas. During a 20-year period in the Navy, they will spend about 60 percent of their time assigned to fleet units and 40 percent to shore stations.



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Earn College Credit



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 office machines and general clerical procedures. To see the college credits available via a **Joint Service Transcript** for this rating:

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https://www.cool.navy.mil/usn/jst/ae_jst.pdf

Earn Department of Labor (DOL) Nationally Recognized Apprenticeships



USMAP

The United Services Military Apprenticeship Program (USMAP) is a formal military training program that provides active duty and Full Time Support (FTS) Service members the opportunity to improve their job skills and to complete their civilian apprenticeship requirements while they are on active duty. The U.S. Department of Labor (DOL) provides the nationally recognized "Certificate of Completion" upon program completion. Visit United Services Military Apprenticeship Program (USMAP) for LS apprenticeships.

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<https://usmap.netc.navy.mil/usmapss/static/navyRates.htm>

Earn Industry Recognized Credentials



Navy Credentialing Opportunities On-Line (Navy COOL)

Navy COOL catalogs and defines comprehensive information on occupational credentials - including certifications, licenses, and apprenticeships - correlating with every Navy rating and some collateral duties. It provides "how to" instructions for pursuing these credentials, links to credentialing organizations, and cross-references to programs that help Sailors pay for credentialing fees. Shortly following the initial rating technical training (Class "A" technical school), Sailors may be able to take advantage of earning civilian/industry certifications & licenses (credentials), funded through Navy

COOL. Visit the Navy COOL website to view these opportunities. See the link below.

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<https://www.cool.navy.mil/usn/enlisted/ae.htm>

Manage a Navy Career with Navy LaDR (Learning and Development Roadmap)



To see the Navy LaDR (Learning and Development Roadmap) for this rating:

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https://www.cool.navy.mil/usn/LaDR/ae_e1_e9.pdf

Earn Skill Sets Towards Civilian Related Occupations



The skill sets for this rating crosswalk to civilian related occupations listed by the U.S. Department of Labor. To see Related Civilian, Federal, and Military Sealift Command Occupations for this rating, see the link below.

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<https://www.cool.navy.mil/usn/enlisted/ae.htm>

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