ELECTRICAL PROGRAMS

Associate of Applied Science Degree

- Electrical Apprenticeship
- Electrical Lineworker Certificate
- Certificate Program

Certificates of Completion - Important information about the educational debt, earnings, and completion rates of students who attend these certificate programs can be found on the following https://dacc.nmsu.edu/gainfulemployment/.

Electrical Apprenticeship

**NOTICE**: On March 6, 2018, the NMSU Board of Regents approved the proposal to close the DACC Electrical Apprenticeship program. Students who currently have a declared major in Electrical Apprenticeship (working toward either a certificate or an AAS degree) will be offered a reasonable opportunity (approximately 36 months) to complete their program of study. No new students will be admitted into the Electrical Apprenticeship program.

DACC’s electrician program teaches students various installation and maintenance techniques for residential, commercial and industrial electrical systems based on the national electrical code (NEC). Faculty members of the program bring to the classroom many years of real-world experience working with and installing various electrical devices used in job sites.

DACC’s general electrician program includes training courses structured around NCCER curriculum and National Electrical Code (NEC) standards. The courses teach students the knowledge and skills needed to install, repair, alter and maintain residential, commercial and industrial electrical systems. Additionally, the Electrician program can provide you with the necessary technical, scientific, communication, and interpersonal skills for successful employment.

Concepts discussed in lecture are applied through hands-on lab projects that utilize DACC’s lab facilities. Students work on both team-based and individual projects that simulate real-world jobsites. Lab projects provide students with core hands-on training to build skills needed for the electrician trade.

Many of DACC’s students work with licensed journeyman electricians and contractors to obtain on-the-job training that will apply towards their eligibility to sit for their journeyman electrician license.

Whether taking classes or working on a job site, students enrolled in this program will be required to perform the same job duties and be able to meet the same physical requirements that they will as a graduate in the field. Depending where they find employment, graduates may be required to work in inclement weather, lift up to 50 pounds from the ground, have good eye-hand coordination, work safely around electrical hazards using the appropriate safety equipment, work safely using hand and power tools, ascend and descend stairs and ladders to reach installations, and stand, squat, or kneel for long periods of time.

Certification Program; this program is active, and is accepting new students.

New Mexico electric cooperatives and private firms that perform electrical line work often find it difficult to fill vacancies. DACC’s Electrical Lineworker Program is a one-year pre-apprenticeship certificate program designed to provide students with the technical background and the manual skills necessary for careers in the installation and maintenance of electrical power cables. This training will apply to other industries such as cable television companies, telephone companies and line construction contractors. Opportunities for advancement into supervisory and management positions within these companies is a possibility, but will require a consistently high job performance along with solid leadership skills by individuals.

Students will be exposed to such curriculum topics as AC/DC electrical theory, field training, occupational safety, line construction theory, rigging, and transformers. Campus instruction facilities include a large outdoor training field for pole climbing, line construction, bucket-truck operation and erecting power lines using power-line construction trucks with safety, pole climbing and teamwork highly emphasized. Along with extensive hands-on experience building power lines, students also practice both overhead and underground techniques. As part of the required curriculum, students will be required to work as a cooperative education student with a New Mexico electric cooperative or a private firm that performs electrical line work.

Upon successful completion of the Electrical Lineworker program, the graduate is expected to:

1. Practice the electrical skills of the profession in a conscientious, responsible, and accountable manner while recognizing the need to continue to expand their technical knowledge and skills.
2. Safely climb poles and operate line bucket trucks and pole setting equipment when performing overhead line construction.
3. Safety, teamwork and critical thinking use the acquired analytical skills to solve problems encountered in a field situation.

Graduates are prepared to join the electrical power industry workforce as safe and knowledgeable apprentices.

Additional Graduation Requirements

To receive either an associate degree or a certificate of completion, students are required to obtain a Career Readiness Certificate in the areas of Applied Math, Reading for Information, and Locating Information at the appropriate level for their respective degree option. To facilitate success in obtaining their Career Readiness Certificate students will be required to take 1 credit of OETS 102 Career Readiness Certification Preparation. A program advisor can provide additional information.

Program Admissions Criteria

The following items are required for successful admission into the Electrical Lineworker program:

- Admission to DACC
- Background check through the designated affiliate (adverse findings may disqualify a student from acceptance into the program)
- Drug screening
- Human Performance Evaluation; Very Heavy Test

Electrical Lineworker Certificate Program

PLEASE NOTE: The statement regarding the closure of the Electrical Apprenticeship program does not apply to the Electrical Lineworker
Electrical Apprenticeship - Associate of Applied Science (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/electrical-programs/electrical-apprenticeship-associate-applied-science)

Electrical Apprenticeship - Certificate of Completion (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/electrical-programs/electrical-apprenticeship-certificate-completion)


OEET 110. Basic Electricity and Electronics
4 Credits (3+3P)
An introduction to electricity theory and practice, including electron theory, Ohm’s law, construction of electrical circuits, direct and alternating currents, magnetism, transformers, and practical applications. Same as HVAC 102, ELT 105, OEPB 102.

OEET 130. Introduction to Electrical Power Systems
2 Credits
An overview of electrical power systems, equipment, safety practices, first aid and CPR. Restricted to majors.
Prerequisite: acceptance into the electrical lineworker program.
Corequisite: OEET 110 and OEET 131.

OEET 131. Electrical Lineworker Lab I
6 Credits
Climbing and work on utility poles using ropes and rigging, pole setting and an introduction to transmission and distribution line construction. Maintenance and troubleshooting to include the use of hot sticks. Restricted to majors.
Prerequisite: acceptance into the electrical lineworker program.
Corequisite: OEET 110 and OEET 130.

OEET 140. Electrical Power Systems II
3 Credits (2+2P)
Theory of power generation and distribution with emphasis on three phase systems to include transformers, voltage regulators, surge arrestors. Includes troubleshooting. Restricted to majors.
Prerequisites: acceptance into the electrical lineworker program and OEET 130.
Corequisite: OEET 141.

OEET 141. Electrical Lineworker II
6 Credits
Practice in the installation of electrical power lines including transformers, voltage regulators, and surge arrestors. Also advanced hot sticking procedures, troubleshooting, underground systems procedures, and pole-top rescue. Restricted to: Community Colleges only.
Prerequisites: Acceptance into the lineworker program and OEET 131.
Corequisite: OEET 140.

OEET 151. Electrical Apprenticeship I
6 Credits
Apprenticeship responsibilities and benefits as well as first aid and CPR will be covered. Hand tools, electrical theory, and the regulations imposed by national codes and OSHA. Students will apply theory taught in their jobs.
Prerequisite: consent of instructor.

OEET 152. Electrical Apprenticeship II
6 Credits
Ohm’s law circuit sizing and service panel sizing will be covered in detail. Other topics include low voltage systems, heating and air conditioning circuits, alarm systems and smoke detectors.
Prerequisites: OEET 151 and consent of instructor.

OEET 153. Electrical Apprenticeship III
6 Credits
Various electrical measuring devices will be covered in detail. Inductance, transformers, capacitance, and simple motors will be studied.
Prerequisites: OEET 152 and consent of instructor.

OEET 154. Electrical Apprenticeship IV
6 Credits
Theory and application of three-phase transformers and autotransformers. Electrical distribution using switchboards, panelboards, and circuit breakers.
Prerequisites: OEET 153 and consent of instructor.

OEET 221. Cooperative Experience I
1-4 Credits
Supervised cooperative work program. Student is employed in an approved occupation and is supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.
Prerequisite: consent of instructor.

OEET 251. Electrical Apprenticeship V
6 Credits
Commercial/industrial applications for electricians. Blueprint interpretation, commercial construction types and processes, wiring methods, wiring materials, and motor controls.
Prerequisites: OEET 154 and consent of instructor.

OEET 252. Electrical Apprenticeship VI
6 Credits
In-depth commercial applications to include commercial/industrial service calculations, mobile home parks, multi-family dwellings, and commercial fire/security systems.
Prerequisites: OEET 251 and consent of instructor.

OEET 253. Electrical Apprenticeship VII
6 Credits
Control devices in commercial/industrial applications; emphasis on logic in-line diagrams, time delay starters, reversing starters, and manual/magnetic solenoids.
Prerequisites: OEET 252 and consent of instructor.

OEET 254. Electrical Apprenticeship VIII
6 Credits
Miscellaneous topics for the journeyperson electrician to include power distribution/transmission, solid state controls and relays, photoelectric and proximity controls and programmable controllers.
Prerequisites: OEET 253 and consent of instructor.

OEET 295. Special Topics
1-6 Credits
Topics to be announced in the Schedule of Classes.

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