

Certificate of Achievement in Heavy Equipment Operator Technician

About the Program

Program Goal: Career

GE Pattern(s): None

Program Code: 07260.00CA

The Butte College Heavy Equipment Operator Program prepares students for entry-level employment in the construction, transportation, and agricultural industries through an immersive, hands-on training experience. Designed to be completed in one year, the program provides comprehensive instruction in heavy equipment operation, safety, jobsite communication, basic equipment maintenance, and industry best practices. Students gain practical skills through extensive field-based training that mirrors real-world work environments, including activities such as precision earthmoving, grade checking, interpreting construction plans, and coordinating multiple machine operations. Emphasis is placed on developing strong situational awareness, safe work habits, teamwork, problem-solving skills, and professional readiness. Students also learn fundamental diagnostic and repair procedures to support equipment functionality and reduce downtime on the jobsite. Graduates will be prepared for a variety of entry-level roles, including equipment operator, equipment technician, grade checker, and related support positions. The program is supported by robust industry partnerships with Operating Engineers Local 3, Caltrans, CAL FIRE, local and statewide contractors, and regional agricultural employers. These partnerships strengthen training opportunities and help connect graduates to a growing job market in construction, land development, public works, agriculture, and heavy equipment services.

Program Learning Outcome(s):

Upon successful completion of the program, the student will be able to:

1. Explain the principles of operation and maintenance required to operate and support modern agricultural and industrial powered equipment.
2. Demonstrate the ability to safely and correctly maintain and operate a range of agricultural and industrial powered equipment.
3. Evaluate career opportunities, prospective employers, and skills necessary to achieve employment.

Required courses:		40.00
ITEC 55	Introduction to Industrial Trades	2
AET 10	Civil Surveying and Plan Reading	3.00
AET 15	Grade Setting	3.00
AET 20	Beginning Equipment Operation	6.00
AET 25	Advanced Equipment Operation	6.00
AET 35	Heavy Equipment Methods and Materials	3.00
AET 40	Heavy Truck and Equipment Systems	3.00
AET 45	Heavy Truck and Equipment Maintenance	3.00
AET 50	Safety and OSHA	3.00
AET 60	Underground and Specialized Machines	3.00
AET 75	Commercial Driver's License – Permit Preparation	3.00
WLD 18	Beginning Industrial Welding	2.00

Total: 40.00

Suggested Program Map

Required courses:		Units: 40.00
Term 1		19.00
ITEC 55	Introduction to Industrial Trades	2.00
AET 10	Civil Surveying and Plan Reading	3.00
AET 20	Beginning Equipment Operation	6.00
AET 40	Heavy Truck and Equipment Systems	3.00
AET 50	Safety and OSHA	3.00
WLD 18	Beginning Industrial Welding	2.00
Term 2		21.00
AET 15	Grade Setting	3.00
AET 25	Advanced Heavy Equipment Operation	6.00
AET 35	Heavy Equipment Methods and Materials	3.00
AET 40	Heavy Truck and Equipment Maintenance	3.00
AET 60	Underground and Specialized Machines	3.00
AET 75	Commercial Driver's License – Permit Preparation	3.00

Total: 40.00

Program Research & Recommendation

New Program Proposal Form

New Program Title:	Electrician Trainee Program Electrical Applications
Initiator:	Tom Williams (NC development by John Dahlgren)
First Semester Intended to Offer:	Fall 2027

Type of Program

Use AS for any Science, Technology, Engineering, or Mathematics (STEM) field and for all CTE programs. Use AA for all others.

- AA-T/AS-T
- AA/AS (18 units minimum w/o GE)
Vocational programs must be approved by NFN
- CA-Certificate of Achievement (16 units minimum)
Vocational programs must be approved by NFN
Non-vocational programs are not eligible for Financial Aid and will not be shown in CCC Apply, CAP tool, or Degree Planner
- CA-Certificate of Achievement (8 units minimum)
Only needed if required on a student's official transcript; All others use Certificate
Vocational programs must be approved by NFN
Non-vocational programs are not eligible for Financial Aid and will not be shown in CCC Apply, CAP tool, or Degree Planner
- Certificate – Certificate in... (15.5 units maximum)
Not chaptered, not FA eligible, will not be shown in CCC Apply or student's official transcript
Non-vocational programs will not show in CAP tool or Degree Planner
- Noncredit Certificate of Completion (*Leads to job; minimum 2 courses*)
- Noncredit Certificate of Competency (*Bridges to credit coursework; minimum 2 courses*)

Program Codes

TOP Code:	095220
CIP Code:	46.0302
What COI will this program be in?:	Industrial Technologies Programs

Program Description:

Certificate of Completion (NC) establishes a noncredit mirror to the Certificate of Achievement in Electrical Applications in support of ongoing entry training of individuals pursuing qualification for their Electrician Trainee clearance and card. **The Electrician Training program is an approved training program by the California Division of Labor Standards.** Students enrolled in this program can obtain their Electrician Trainee card to seek employment with a C-10 contractor and earn their required on-the-job hours. The program will prepare Students to pass the State Electrical Examination and Certification process. Students in this program will acquire skills in the principles of electricity, circuitry, and power distribution, electrical construction processes, and safety codes.

Program Courses:

Course No.	Title	Units
ELEC 140	Electrical Training 4	0
ELEC 150	Electrical Training 5	0
ELEC 160	Electrical Training 6	0
ELEC 170	Electrical Training 7	0

How does the program align with the College Mission Statement, District Educational Plan, and Strategic Plan?

This proposed noncredit CTE program directly supports **Butte College's mission** by expanding **high-quality, accessible education and workforce training** through a structured pathway leading to industry skills, employment readiness, and certificates. The program strengthens career pathways by preparing diverse learners for **economic and personal success** and aligns with the College's emphasis on **career and transfer pathways** and equity-centered access.

The proposal also aligns with institutional planning priorities by:

- Expanding **workforce-relevant training** tied to verified regional demand (LMI + advisory validation)
- Increasing **short-term, high-value pathway options** for students seeking rapid entry or reentry to employment
- Strengthening **industry engagement** through ongoing advisory input (a core CTE planning expectation)

Explain how the program is appropriate to the Community College mission of providing the first two years of a baccalaureate degree?

While the primary purpose is workforce entry, the program supports the "first two years" mission in two ways:

1. **On-ramp to credit pathways**

Noncredit programming increases access for adult learners and displaced workers who may later transition into credit certificates/degrees in related areas (e.g., Industrial Technology, Construction, Engineering Support, or other technology pathways). This "stackable" structure supports degree momentum.

2. **Foundational academic and career readiness**

A well-designed noncredit CTE sequence can reinforce foundational competencies (technical math, code literacy, documentation practices, safety, employability skills) that are directly supportive of later credit coursework and degree completion.

This is consistent with Butte College's stated mission of supporting both **career and transfer pathways** through accessible education and workforce training.

How does the proposal demonstrate need for the program?

Need is demonstrated through a **triangulation** model expected for CTE:

- **Labor Market Information (LMI)** from the North Far North Centers of Excellence (regional demand, projected openings, wages, and occupational need)
- **Industry advisory committee minutes** documenting employer validation, hiring needs, and/or requested competencies
- **Regulatory/industry conditions** that require trained individuals and verified competencies for safe installation work

Together, these sources provide both **quantitative** (LMI) and **qualitative** (industry communications) evidence that the program addresses a documented workforce gap.

Annual Completers: How many students do you anticipate completing this program each year?

Projected annual completers: 24 students per year (2 cohorts of ~12 completers).

- A cohort size of ~12 is realistic for safe lab instruction, equipment access, and faculty workload in a hands-on electrical program.
- Two cohorts per year supports steady throughput while balancing constrained lab/lecture space needs.

What are the impacts on existing programs (enrollment, staffing, section offerings)?

Enrollment impacts

- Positive impact through **new-to-college** and returning adult learners who may not be ready for credit entry.
- Potential feeder effect into existing credit programs in Industrial Technology and related areas.

Staffing impacts

- Requires **1 new full-time faculty** for core noncredit program delivery and coordination.
- Continued use of **Associate Faculty** for ITEC-55 courses reduces disruption to existing staffing patterns.

Section offerings

- Some scheduling displacement risk due to the need for lecture and lab space; however, with identified alternative lecture buildings (LRC/MC/LS), impacts can be mitigated through coordinated scheduling and block planning.

Enter the number of new faculty positions, both part- and full-time. If existing faculty are sufficient, enter zero (0)

- **Full-time faculty positions (new): 1**
- **Part-time/Associate faculty positions (new): 0** (continuing current Associate Faculty utilization for ITEC-55)

Minimum/preferred qualifications strengthen program quality:

- State certification as residential/commercial installer (required)
- CSLB **C-10** preferred (credibility + industry alignment)

Is there sufficiency of institutional resources to support the long-term vitality of the program?

Yes—with stated conditions addressed.

Sufficiency is supported by:

- **Recurring operating budget** identified: **\$40,000 annually** for consumables/small tools
- **Capital equipment covered by Catalyst grant funds**, reducing long-term General Fund capital burden (<https://www.labor.ca.gov/jobs-first-catalyst-phase-awardees/>)
- Clear identification of lecture space alternatives and lab footprint requirements

Key long-term viability conditions:

- Confirm sustained annual funding for consumables
- Confirm **dedicated lab access** comparable to HVAC lab size (40' x 40')
- Confirm ability to recruit/retain qualified FT faculty given external wage competition

New Equipment needed (include cost)

Initial startup need for hand tools, simulator systems and construction costs for student work areas likely **\$150,000 including computers and associated hardware for 24 students**. This consideration includes annual costs associated with eLearning licensing access for students

New/Remodeled Facilities (include cost)

Facilities requirement:

- **Lab space: 40' x 40'** (HVAC-lab-equivalent)
- **Lecture space:** classroom in **LRC, MC, or LS** buildings

Cost: TBD (depends on whether you repurpose existing space or remodel/build out a dedicated lab). Typical cost drivers to note (without inventing figures): power distribution, safety systems, benches/workstations, storage, code-compliant egress, ventilation (if applicable), and instructional technology.

Library Acquisitions (include cost)

Recommended baseline acquisitions to support instruction, safety, and documentation:

- National Electrical Code (NEC) references (current edition as required by program)
- Electrical installation textbooks/workbooks aligned to curriculum
- Code interpretation guides and exam-prep references (if pathway connects to licensing)
- Safety and standards references relevant to electrical work and lab instruction

Estimated annual library acquisition cost: \$3,500 (initial build-out may be higher if starting from minimal holdings).

Is the program compliant with all applicable laws, regulations, and curriculum standards?

Yes, the program is designed to be compliant, assuming standard approval steps are followed:

- Title 5 and CCCC curriculum approval requirements for noncredit CTE
- Local curriculum committee and Board approval processes
- Advisory committee validation and periodic review (CTE expectation)
- Instructor qualification requirements consistent with district hiring standards and program needs
- Facilities and lab safety compliance for hands-on electrical training

Will the program be eligible for Financial Aid (CA's with vocational TOP and degrees)?

For **noncredit**, traditional federal Title IV financial aid is typically **not available in the same way as credit degrees/certificates**.

Distance Education - Indicate the extent to which the courses associated with the degree are conducted via distance education _____0% _____1-49% **X** 50-99% _____100%

For Career Education Programs: Provide labor market information (LMI) and other employers demand documentation demonstrating that there are jobs and careers available for program graduates

Signature: _____

Date: _____

Contact Information: _____

Return This Form to Scheduling Center for processing at Centersh@butte.edu

Program Research & Recommendation

New Program Proposal Form

New Program Title:	Electrician Trainee Program Electrical Theory
Initiator:	Tom Williams (NC development by John Dahlgren)
First Semester Intended to Offer:	Fall 2027

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Program Courses:

Course No.	Title	Units
ITEC 55	Introduction to Industrial Trades	0
ELEC 100	Introduction to Electrical Training	0
ELEC 110	Electrical Training 1	0
ELEC 120	Electrical Training 2	0
ELEC 130	Electrical Training 3	0

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