

This deliverable contains East Central Community College's Electrical Technology CTE program which facilitates a stackable credential career pathway model, embeds NAM endorsed credentials, and utilizes online and hybrid instructional technology. This deliverable was developed through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program Round 4 Grant *Winston County Manufacturing Recovery Project* TC-26437-14-60-A-28.

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

WINSTON COUNTY MANUFACTURING RECOVERY PROJECT

Strategy 1: Build programs that meet industry needs.

Action 1.4: Provide access at the Louisville center to ECCC's Electrical Technology CTE program, modified by embedding credentials and skills training identified by employers, including assessments that authenticate the mastery of specific skills and knowledge learned by students.

Deliverable #6: Modified Electrical Technology curriculum

Strategy 3: Accelerate and improve certification and employment attainment.

Action 3.1: ECCC will modularize its modified Electrical Technology program to be offered at the Louisville center into 30-hour, 45-hour, and 60 hour components.

Deliverable #16: Modified Electrical Technology curriculum

Strategy 4: Strengthen online and technology-enabled learning.

Action 4.1: ECCC will replicate East Mississippi Community College's (TAACCCT 3) approach to embedding technology into its modified Electrical Technology CTE program (Action 1.4) and will use hybrid instruction and active learning to offer its modified Electrical Technology program at its Louisville center in Winston County.

Deliverable #18: Modified Electrical Technology curriculum



Approved Curriculum Electrical Technology For Winston County Hybrid Delivery



The Electrical Technology Career Technical Education program was reviewed to identify special needs for Winston County. No changes to the curriculum were made. The only unique aspect of this program is its hybrid delivery method. Using the college’s Polycom interactive conferencing system, lead instructors are located at the main campus in Decatur while the students and support instructors are located at the Louisville center in Winston County.

The Electrical Technology program prepares individuals to install, operate, maintain, and repair electrical systems. These systems include residential, commercial, and industrial wiring, motors controls, and electrical distribution panels. The program offers extensive hands-on training in electrical troubleshooting and the development of problem-solving skills in industrial electrical procedures, programmable logic controllers, and process control.

Electrical Technology is an articulated career and technical program designed to provide its students with technical skills. The technical program consists of essential skills that may be obtained in a secondary program or at the community/junior college level and technical skills and academics that must be obtained at the community/junior college level.

This curriculum in Electrical Technology was developed using the competencies and objectives as developed by the National Center for Construction Education and Research (NCCER). Also, the National Electrical Code was used to ensure compliance with applicable codes.

The Electrical Technology curriculum is located on p.120 in the ECCC Catalog and can be found by following the link:

https://my.eccc.edu/ICS/ClientConfig/HtmlContent/FlippingBooks/eccc_catalog_201617/index.html#

The Mississippi Community College Board curriculum can be found at:

<http://sbcjweb.sbcjc.cc.ms.us/oci/pdfs/ci/pathway/Electrical%20Technology%202014.pdf>

The NCCER Electrical Level 1 and 2 Certifications have been identified as the technical exit assessment for the Electrical Technology program. The assessment validates technical skills learned during the program. See below for detailed information regarding the NCCER Certification.

Amatrol training systems and online instructional modules are incorporated into classroom instruction.

Course Number	Course Name	Credentials	Technology
30-hour Career Certificate Module			
ELT 1144 4 hours	AC/DC Circuits	NCCER* Electrical Level 1	Digital Multimeters, Oscilloscope, Bread Board Generators

ELT 1192 2 hours	Fundamentals of Electricity	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Amatrol
ELT 1113 3 hours	Residential Wiring	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Constructor 12, Vizeo
ELT 1263 3 hours	Electrical Drawings and Schematics	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Constructor 12, Vizeo
ELT 1183 3 hours	Industrial Wiring	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Constructor 12, Vizeo
ELT 1213 3 hours	Electrical Power	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Amatrol, FutureTech
ELT 1123 3 hours	Commercial Wiring	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Constructor 12, Vizeo
ELT 1413 3 hours	Motor Control Systems	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Amatrol, FutureTech
ELT 1253 3 hours	Branch Circuits and Service Entrance Calculations	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Amatrol, FutureTech
ELT 1223 3 Hours	Motor Maintenance and Troubleshooting	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Rockwell Automation Software PLC Platforms, Amatrol, FutureTech
45-hour Technical Certificate Module			
ELT 2614 4 Hours	Programmable Logic Controllers	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Rockwell Automation Software PLC Platforms, Amatrol, FutureTech
ELT-2114 4 Hours	Equipment Maintenance, Troubleshooting and Repair	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Rockwell Automation Software PLC Platforms, Amatrol, FutureTech
ELT-2424 4 hours	Solid State Motor Control	NCCER* Electrical Level 1 Electrical Level 2	Digital Multimeters, Rockwell Automation Software PLC Platforms, Amatrol, FutureTech

ELT 2913 3 Hours	Special Projects I	NCCER* Electrical Level 1 Electrical Level 2 OSHA 1910 OSHA 1926 Forklift Safety	Digital Multimeters, Rockwell Automation Software PLC Platforms, Amatrol, FutureTech
60/61-hour Associate of Applied Science Degree Module			
ENG 1113 3 Hours	English Composition I		
3/4 hours	Math/Science Elective		
3 hours	Humanities/Fine Arts Electives		
3 Hours	Social Behavioral Science Elective		
SPT 1113 3 hours	Public Speaking I		

NOTE: During the curriculum writing team meetings with the Mississippi Community College Board (MCCB), it was decided that credentials should be delivered during the community college students' first year. Embedding the credentials in the first year will allow community college students an exit point with a 30-hour Career Certificate and industry-recognized credentials.

* NCCER- The National Center for Construction Education and Research was developed with the support of more than 125 construction CEOs and various association and academic leaders who united to revolutionize training for the construction industry. Sharing the common goal of developing a safe and productive workforce, these companies created a standardized training and credentialing program for the industry. This progressive program has evolved into curricula for more than 70 craft areas and a complete series of more than 70 assessments offered in over 4,000 NCCER-accredited training and assessment locations across the United States. NCCER develops standardized construction and maintenance curriculum and assessments with portable credentials. These credentials are tracked through NCCER's registry that allows organizations and companies to track the qualifications of their craft professionals and/or check the qualifications of possible new hires. NCCER's registry also assists craft professionals by maintaining their records in a secure database.