
Appendix A

WORK PROCESS SCHEDULE AND RELATED INSTRUCTION OUTLINE

DEVELOPED FOR
NORTH ALABAMA CRAFT TRAINING FOUNDATION

APPROVED BY THE
ALABAMA OFFICE OF APPRENTICESHIP
ALABAMA DEPARTMENT OF COMMERCE

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(Registration Agency Rep)

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Appendix A

WORK PROCESS SCHEDULE ELECTRICIAN

O*NET-SOC CODE: 47-2111.00 RAPIDS CODE: 0159

National Occupation State Occupation

This schedule is attached to and a part of these Standards for the above identified occupation.

1. APPRENTICESHIP APPROACH

Time-based Competency-based Hybrid

2. TERM OF APPRENTICESHIP

The term of the apprenticeship is 8,000 hours, supplemented by the 667.5 total hours of related instruction.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: 1 apprentice(s) to 1 journeyworker(s).

4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages specified in each Employer Acceptance Agreement (Appendix D). The minimum journeyworker wage for this program shall not be less than \$16.00/hr. and the starting wage shall not be less than \$8.00/hr. At a minimum, each employer is required to increase the apprentice’s wage at the intervals outlined below.

In no case will the starting wages of apprentices be less than that required by a minimum wage law that may be applicable.

PERIOD	HOURS	% OF JOURNEYWORKER WAGE
1 st	0-2,000	50%
2 nd	2,001-4,000	60%
3 rd	4,001-6,000	70%
4 th	6,001-8,000	90%
5 th	Completion wage	100%



5. PROBATIONARY PERIOD

Every applicant selected for apprenticeship will serve a probationary period of 500 hours.

6. SELECTION PROCEDURES

SECTION I – MINIMUM QUALIFICATIONS

Applicants will meet the following minimum qualifications to be eligible for the pool of applicants:

A. Age

Applicants must not be less than 18 years of age and provide appropriate verification of age respecting Alabama state laws.

B. Physical

Applicants will be physically capable of performing the essential functions of the apprenticeship program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.

C. Other

Applicants must possess a valid driver's license and must pass a drug screen prior to the acceptance of the apprenticeship program.

SECTION II – SELECTION PROCEDURES

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

1. An announcement of specific apprenticeship openings must be disseminated thirty (30) days in advance of the earliest date for application at each interval to the following agencies/ organizations:

- Registration Agency
- Women's Organizations/Centers Local Schools



- Employment Service Center One Stop Centers
- Vocational Education Schools
- Other Organizations/Centers (which can effectively reach minorities and women)

The announcement shall include the nature of the apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship applications, and the Sponsor's equal opportunity policy. The period for accepting applications as established by the Sponsor is July 9- July 20 of each year.

2. Cooperation with school boards and vocational educational systems to develop programs for preparing students to meet the standards and criteria to qualify for entry into the apprenticeship program.

3. Internal communication of the Sponsor's Equal Opportunity Policy; will conduct in such a manner to foster understanding, acceptance, and support among the Sponsor's various officers, supervisors, employees, and members to encourage such persons to take the necessary action to aid in meeting its obligations under Title 29, CFR, and Part 30.

4. Utilization of journeyworkers to assist in the implementation of affirmative action in the apprenticeship program.

5. Granting advance standing or credit based on previously acquired experience, training, skills, or aptitudes for all applicants equally.

The Sponsor may grant credit towards the term of apprenticeship to new apprentices who demonstrate previous acquisition of skills or knowledge equivalent to that which is under these Standards. Apprentice applicants seeking credit for previous experience gained outside the supervision of the Sponsor must submit the request at the time of application and furnish such records, affidavits, and a letter from his/her employer to substantiate the claim. Applicants requesting such credit whom selected into the apprenticeship program will start at the beginning wage rate. The request for credit will consist of an evaluation and a determination made by the Sponsor during the probationary period when actual on-the-job and related instruction performance during observation. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after the review of the apprentice's previous work and training/education record and evaluation of the apprentice's performance and demonstrated skill and knowledge during the probationary period. An apprentice granted credit should be advance to the wage rate designated for the period to which such credit accrues. The sponsor will advise the Registration Agency on any credit granted and the wage rate to which the apprentice. The granting of advanced standing is, uniformly applied to all apprentices as determined above.

6. NACTF will fill from an internal pool of employees and employers agree to post apprenticeship openings in locations visible to all employees



SECTION III – DIRECT ENTRY

The sponsor who invokes a direct entry provision may do so without regard to the existing selection procedure or minimum qualifications used for entry into the apprenticeship program. Direct entry shall be done without regard to race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation, genetic information, or an individual with a disability or a person 40 years old or older. The methods for direct entry are as follows:

- A. A military veteran who has completed military technical training school and/or participated in a registered apprenticeship program or related occupation while in the military in the occupation registered. Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience. The sponsor, with the assistance of the training provider and employer, will evaluate the training received to grant appropriate credit.
- B. An individual who has completed an AOA certified pre-apprenticeship training program and meets the minimum qualifications of the apprenticeship program. may be admitted directly into the program. The applicant shall provide official documentation confirming that they fulfilled the specific requirements of the pre-apprenticeship program, such as skills assessments, completion/graduation certificates, and transcripts. The sponsor will evaluate the pre-apprenticeship training received to grant appropriate credit.
- C. Individual who is a current employee by an employer with an Employer Acceptance Agreement. The employer will evaluate the current employee's skills to grant appropriate credit.



WORK PROCESS SCHEDULE ELECTRICIAN

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Work Process Guidelines:

- During the apprenticeship, the apprentice shall receive work experience and job-related education in all phases of the occupation, including safe work practices, necessary to develop the skill and proficiency of a skilled professional.
- The program sponsor or its designated apprenticeship committee must ensure apprentices are rotated throughout the various work processes to ensure a well-rounded professional upon completion of the apprenticeship and identify what methodology will be used to track progression of experience on-the-job.
- Such on-the-job learning shall be carried on under the direction and guidance of a qualified professional.

Work Processes	Approximate Hours
Preliminary Work	600
Learning the names and uses of the equipment used in the trade, such as kind, size and use of cable, wire, boxes, conduits and fittings, switches, receptacles, service switches, cutouts, etc.	
Learning names and uses of various tools used in assembling this material, care of these tools and other instructions necessary to familiarize the apprentice with the material and tools of the trade	
Residential and Commercial Rough Wiring	2,500
Assisting in getting the material from stockroom	
Loading truck and unloading material and equipment on the job	
Laying out the various outlets, switches, receptacles, and other details of the job from blueprints or by direction of the superintendent of construction	
Laying out the system with materials to be used, where they are to be placed, and other details as to how they should be run	
Cutting wires, cables, conduit and raceway, threading and reaming conduit, boring and cutting chases under the direction of the journeyman	
Installing various kinds of wires, cables, and conduits in accordance with requirements	
Assisting journeyman in pulling wires, attaching wires to fish tape, and keeping wires from kinks or abrasions	
Connecting conductors to switches, receptacles or appliances with	



proper methods of splicing, soldering, and typing	
Installing service switches or load center and sub-feeders and fastening up these parts, running raceways and pulling in conductors under the direction of journeyman electricians	
Assisting in preparing lists of materials used including names, and number of pieces or number of feet, etc. for office records	
Loading unused material and cleaning up job area	
Residential and Commercial Finish Work	1,500
Connecting and setting switches, receptacles, plates, etc.	
Installing proper size and types of fuses for each conduit	
Installing and connecting various kinds of fixtures	
Tracing the polarity of conductors and devices	
Treating the circuit for grounds and shorts; locating and correcting job defects	
Assisting journeyman in installation and completion of work in accordance with the rules and regulations of the National Board of Fire Underwriters and special local regulations-proper size of wires, services, conduits, etc.	
Industrial Lighting and Service Installation	2,000
Installing rigid conduit, electric metallic tubing, BX armored cable wire molds on all types of heavy electrical equipment and major size service entrance installation	
Wiring all types (gas, oil, stoker, etc.) of heating equipment	
Installing wiring and controls for air conditioning	
Troubleshooting	1,000
Repairing all kinds of electrical work	
Checking out trouble and making repairs under supervision of journeyman electrician	
Checking out trouble and making repairs without supervision	
Motor Installation and Control	400
Installing over current devices	
Checking for proper installation and rotation	
Installing replacement motors	
Analyzing motor circuits and troubleshooting	
Installing emergency generators and controls	
Install pushbuttons, pilot lights, relays, timing devices, and interlocking controls	
Total Program OJL Hours	8,000



**RELATED INSTRUCTION OUTLINE
ELECTRICIAN**

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Related Instruction Guidelines:

- The course listings outline the related instruction that supplements the on-the-job learning. It is through the combination of both the on-the-job learning and the related instruction that the apprentice can reach the skilled level of the occupation.
- Each apprentice's attendance and progress in related education must be tracked and appropriate records maintained.
- Time devoted to the job-related education shall not be considered as part of the on-the-job learning.
- Failure on the part of the apprentice to fulfill their obligation as to the related education and/or attendance, or their failure to maintain passing grades therein, shall constitute adequate cause for cancellation of their Apprenticeship Agreement.

Hours Instruction Provided: During Work Hours During Non-Work Hours Both
 Instruction Method: Classroom Correspondence/Shop Web-Based Learning

RTI Provider Name: North Alabama Craft Training Foundation
 Contact Name: Wade Thompson
 Contact Phone: 256-690-1677
 Contact Email: wade@nactf.org
 Contact Address: P.O. BOX 6145, Huntsville, AL 35813

Subject / Topic	Contact Hours
NCCER Core	
Basic Safety	12.5
Introduction to Construction Math	10
Introduction to Hand Tools	10
Introduction to Power Tools	10
Introduction to Construction Drawings	10
Basic Communication Skills	7.5
Basic Employability Skills	7.5
Introduction to Material Handling	5
Total NCCER Core RTI Hours	72.5
Level 1 - Electrical	
Orientation to the trade	2.5



Safety for Electricians	10
Introduction to Electrical Circuits	7.5
Electrical Theory	7.5
Introduction to the National Electrical Code	7.5
Device Boxes	10
Hand Bending	10
Wireways, Raceways and Fittings	20
Conductors and Cables	10
Basic Electrical Construction Documents	7.5
Residential Wiring	15
Electrical Test Equipment	5
Total Level 1 RTI Hours	112.5
Level 2 - Electrical	
Alternating Current	17.5
Motors: Theory and Application	20
Electric Lighting	15
Conduit Bending	15
Pull and Junction Boxes	12.5
Conductor Installations	10
Cable Tray	7.5
Conductor Terminations and Splices	7.5
Grounding and Bending	15
Circuit Breakers and Fuses	12.5
Control Systems and Fundamental Concepts	12.5
Total Level 2 RTI Hours	145
Level 3 - Electrical	
Load calculations - Branch and Feeder Circuits	17.5
Conductor Selection and Calculations	15
Practical Applications of Lighting	12.5
Hazardous Locations	15
Overcurrent Protection	25
Distribution Equipment	12.5
Transformers	12.5
Commercial Electrical Services	10
Motor Calculations	12.5
Voice, Data & Video	10
Motor Controls	12.5
Total Level 3 RTI Hours	155
Level 4 - Electrical	
Load Calculations - Feeders and Services	20
Health Care Facilities	10



Standby and Emergency Systems	10
Basic Electronic Theory	10
Fire Alarm Systems	15
Specialty Transformers	10
Advanced Controls	20
HVAC Controls	15
Heat Tracing and Freeze Protection	10
Motor Operation and Maintenance	10
Medium Voltage Terminations / Splices	10
Special Locations	20
Fundamentals of Crew Leadership	22.5
Total Level 4 RTI Hours	182.5
Total Program RTI Hours	667.5