

FP&M Apprenticeship Program – Electrical Standards and Procedures

Division of Facilities Planning & Management

University of Wisconsin – Madison

30 N. Mills Street

4th Floor

Madison, WI 53715

<https://physicalplant.wisc.edu/>

Current Program Administrator:

Corey Popp, Apprenticeship Program Manager

corey.popp@wisc.edu

February 11, 2025

Version: 4

INTRODUCTION

The Division of Facilities Planning & Management launched an Electrical apprenticeship program July 2024. The purpose of the Program is to build our talent pipeline with an employer-driven model that combines on-the-job-training and learning along with classroom instruction. The goal is to recruit, train and prepare skilled and diverse talent to work for UW-Madison as a Journey Worker in their designated trade. FP&M's apprenticeship program shall comply with all applicable [Wisconsin Apprenticeship Law](#) (ss 106.01).

EQUAL OPPORTUNITY PLEDGE

The University of Wisconsin-Madison is committed to providing equal opportunity and equal access in compliance with all applicable federal and state laws and regulations and University of Wisconsin System and university non-discrimination policies and procedures, including but not limited to Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, and national origin, Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability, and the Age Discrimination Act of 1975, which prohibits discrimination on the basis of age. Any apprentice or applicant for apprenticeship who believes that he/she/they has been discriminated against on the basis of race, color, religion, national origin, or sex with regard to apprenticeship or that the equal opportunity standards with respect to his/her/they selection have not been followed in the operation of an apprenticeship program may file a complaint with the FP&M Human Resources Department, the UW-Madison Office of Human Resources Workforce Relations Department or the UW-Madison Office of Compliance. In addition, FP&M will operate the apprenticeship program as required under [29 CFR § 30](#) and [DWD 296.03](#).

QUALIFICATIONS FOR AN APPRENTICESHIP

Applicants will meet the following minimum qualifications.

A. Age

Minimum age required by FP&M for persons entering the apprenticeship program is 18 years of age.

B. Education

A high school diploma, General Educational Development (GED) equivalency or other high school equivalency credential is required.

C. 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.

D. Aptitude Test

All applicants must pass one of the following assessments: (Appendix C)

- ACT
- Accuplacer Classic
- Accuplacer Next Gen

RECRUITMENT

APPRENTICE

FP&M will partner with community organizations (i.e., Urban League of Greater Madison), Dane County jobs and campus resources to post the apprenticeship opportunity.

The recruitment will be conducted by FP&M's Trades Apprenticeship Committee.

The Trades Apprenticeship Committee will consist of the following:

- FP&M Physical Plant Director of Maintenance Operations or designee
- FP&M Physical Plant Trades Employee (2)
- FP&M Human Resources Recruitment Specialist
- FP&M EID Committee Member (TBD)

The Trades Apprenticeship Committee will serve as the search and screen committee, as well as the interview panel, and will receive training on FP&M's recruitment, assessment and selection processes and procedures. Applicants will submit a cover letter and resume, as well as 3 professional references. A former teacher will be considered a professional reference. Successful applicants will interview with the Trades Apprenticeship Committee members.

Selected applicants will be required to complete a mechanical aptitude test. Offers will be extended via employment waiver.

SUPERVISION OF APPRENTICES AND RATIOS

The State of WI requires a 1-to-1 ratio for journey worker for each apprentice. As such, a primary mentor will be assigned to an apprentice, along with back-up mentors to fill in during primary mentor's vacation, illness, leave of absences or departure.

Mentors will be employed within the department the apprentice is employed in. The department supervisor will seek volunteers to serve as mentors. If there are insufficient volunteers, the department supervisor may assign staff to serve as mentors. The role of mentor will appear as a unique responsibility in the mentor's position description.

Mentors will receive mentor training prior to an apprentice joining the department. The mentor training will be conducted by Madison College. No apprentice shall work without proper or adequate supervision of the journey worker. For these apprenticeship standards, adequate or proper supervision of the apprentice means the apprentice is always under the supervision of a fully qualified journey worker or supervisor who is responsible for making work assignments, providing on-the-job (OTJ) training, and ensuring safety at the worksite.

To supervise an apprentice adequately or properly does not mean the apprentice must be within eyesight or reach of the supervisor, but that the supervisor knows what the apprentice is working on; is readily available to the apprentice; and is making sure the apprentice has the necessary instruction and guidance to perform tasks safely, correctly, and efficiently.

FP&M will ensure a one-to-one ratio of apprentice to a fully proficient worker (journey worker) consistent with proper supervision, training, safety, and continuity of employment. Ratio of apprentices to fully proficient workers (journey worker) will be noted in Appendix A.

PROBATIONARY PERIOD

The term of the occupation will be hybrid with an OJT attainment supplemented by the required hours of related instruction as stated on the Work Process Schedule and Related Instruction Outline (Appendix A).

Every applicant selected for apprenticeship will serve a probationary period. The probationary period cannot exceed 25 percent of the length of the program or 1 year, whichever is shorter. During the probationary period, either the apprentice or the Sponsor (Joint Apprenticeship Committee) may terminate the apprenticeship agreement, without stated cause, by notifying the other party in

writing. The records for each probationary apprentice will be reviewed prior to the end of the probationary period.

Records may consist of periodic reports regarding progression made in both the OJT and related instruction, and any disciplinary action taken during the probationary period. Any probationary apprentice evaluated as satisfactory after a review of the probationary period will be given full credit for the probationary period and continue in the program. After the probationary period, the apprenticeship agreement may be cancelled at the request of the apprentice or may be suspended or cancelled by the Sponsor for reasonable cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, Sponsor will provide written notice to the apprentice and to the Bureau of Apprenticeship Standards of the final action taken.

Table of Contents

Section One: Policies established in the Wisconsin Apprenticeship Manual
1. Membership of a State Committee (Ch. 2.5)
2. State Committee Operations (Ch.2.6)
3. Program Standards (Ch. 5)
4. Exhibit A (Ch.6.2)
Section Two: Policies established by BAS and the State Committee
1. Organizations that Nominate Members
2. Minimum Qualifications of Applicants
3. Minimum Qualifications of Employers
4. Requirements for Supervision
5. Additional Requirements
6. Exhibit A

Section One:

Policies established in the Wisconsin Apprenticeship Manual

1. Membership of a State Committee

A. The membership of a State Committee is comprised of no less than four and no

more than 20 members, consisting of an equal number of members representing employer and employee interests. Membership of a State Committee must

represent all occupations overseen by that committee, all types of employers active in training apprentices, and a variety of geographic areas of the state. The Bureau may designate consultants to serve as non-voting members, including technical college representatives, apprenticeship coordinators, training instructors, and other interested parties.

B. Employer Members

Employer members will be nominated by professional organizations involved in the training of apprentices in the affiliated occupations. Such organizations must be actively training apprentices, or have done so within the last two years, to nominate a member. This requirement is waived for organizations involved in the development of a new apprenticeship occupation. Where no professional organization exists, the Bureau may identify and appoint members. In a construction State Committee, the percentages of employer members representing union employers and non-union employers must approximate the percentages of union and non-union apprentices in the occupation(s) statewide. For example, a 10-member State Committee with 60 percent union and 40 percent non-union apprentices would have six union members and four nonunion members.

C. Employee Members

Employee members are nominated to the Bureau by employee organizations and sponsor in-house apprenticeship committees. In cases where a sponsor has no in-house apprenticeship committee, nominees will be solicited from employers or professional organizations.

D. Terms

State Committee members will serve terms of three years and may be nominated for additional terms. Memberships will be staggered to maintain continuity. Vacancies may be filled, or members changed during an active term, at the request of the nominating entity. The Bureau may remove a person from membership on a State Committee for one or more of the following reasons:

- 1) Failure to attend at least 75 percent of the committee meetings during the membership term, unless excused by the Bureau for good cause;

- 2) Failure to meet the membership requirements outlined in this section, unless a documented exception is granted by the Bureau; and/or
- 3) Violation of any state apprenticeship statute, rule or standard.

2. State Committee Operations

A. Meetings

State Committees meet at least twice per year, or more frequently if requested by the Bureau, in conformity with the Wisconsin Open Meeting Law. The committee will elect two co-chairs: one employer member and one employee member. A quorum exists when at least two employer and two employee members are present. Official meeting minutes will be prepared and catalogued by the Bureau.

B. Duties

State Committees are designed to arrive at recommendations based on consensus, meaning that the recommendations they make to the Bureau should reflect the interests of the collective group, rather than a simple majority. Reaching consensus does not assume that every member will be in complete agreement, but that a compromise has been reached. Primary State Committee functions are to:

- i. Advise the Bureau and educators, such as the Wisconsin Technical College System (WTCS) and private training centers, on curriculum content and delivery of related instruction concerning the State Committee's apprenticeship programs.
- ii. Make recommendations for revisions to the state minimum standards to the State Committee's affiliated occupations every five years, or more frequently as needed. These minimum standards include:
 - a. The provisions of the Exhibit A, with the exclusion of compensation;
 - b. Minimum qualifications for apprentices, such as entrance scores;
 - c. Minimum qualifications for apprentice sponsors; and
 - d. Employer requirements to serve as an apprentice trainer.
- iii. Advise the Bureau on policies and procedures pertaining to the administration of each apprenticeship occupation associated with the State Committee, including matters related to:
 - a. Apprentice reviews;

- b. Apprentice selection processes;
- c. Assessing and awarding credit for previous experience and education;
- d. Local apprenticeship committee operations and meeting frequency;
- e. Apprentice layoff and transfer policies and procedures;
- f. The formation and dissolution of local apprenticeship committees;
- g. Outreach and expansion strategies.

Program Standards

C. Term of Apprenticeship

The sponsor must indicate, for each occupation, the basis for tracking apprentice progress: competency, time, or a hybrid. Regardless of the tracking method, an apprenticeship must entail at least one year of work experience and related instruction.

Competency-Based The occupation must be approved for administration as a competency-based apprenticeship by U.S. DOL. If not, the sponsor must consult the Bureau to determine if it is suitable as a competency-based occupation. The program standards must detail:

- a. The on-the-job learning component of the apprenticeship program;
- b. The required competencies to be mastered during the apprenticeship;
- c. How demonstration of the competencies will be determined, including
written and hands-on evaluations that occur in a controlled setting that permit accurate and verifiable results;
- d. The related instruction, which must comply with the apprenticeship statute, regulations, and rules.

Time-Based

The traditional method of apprenticeship delivery, consisting of at least 2,000 hours of on-the-job learning. This approach monitors an apprentice's progress through tasks described in a work process schedule for the occupation.

Hybrid

Measures skill attainment through a combination of a specified minimum number of hours of on-the-job learning and successful demonstration of competencies as described in Exhibit A to the apprenticeship contract.

D. Work Processes

Standards must contain a schedule of work processes associated with the apprenticeship occupation. The work processes are an outline of supervised work experience that the apprentice will receive through on-the-job learning.

E. Related Instruction

The provision for organized related and supplemental instruction relevant to the occupation must be outlined in the standards and include a minimum of 144 hours of paid related instruction per year for the first two years of the program. Programs which are longer than two years must have at least 400 hours of paid related instruction during the term of the apprenticeship.

Instruction may be delivered through the classroom, occupational or industry courses, electronic media, or other instruction approved by the Bureau.

Instructors must meet educational and occupational requirements established by the Bureau and WTCS.

F. Numeric Ratio Description

Program standards must identify a numeric ratio of apprentices to journeyworkers that is consistent with proper supervision, training, safety, and continuity of employment. The ratio language shall be specific as to its application to the job site, workforce, department, or plant—with the employer's workforce being the preferred manner of expressing the ratio for Wisconsin registered apprenticeship programs.

The ratio shall not exceed one journeyworker per apprentice, except where a collective bargaining agreement applies, then the ratio prescribed in the agreement may be used.

G. Probationary Period

The length of the probationary period for the apprentice, in relation to the full apprenticeship term, must be designated in the program standards. The probationary period cannot exceed 25 percent of the length of the program, or one year, whichever is shorter.

Exhibit A

A. The apprenticeship contract details the stipulations of the apprenticeship training program and incorporates the program standards by reference. The contract must be agreed to and signed by the sponsor, the director of the Bureau (on behalf of the Department), and the apprentice (or in the case of a minor, the parent or guardian). The contents of each apprentice contract are not valid unless approved by the Bureau. The Bureau generates each contract. The contract face template, created by the Bureau, is in accordance with Wis. Admin. Code Ch. 295.07. (Manual, Ch. 6, first paragraph).

B. Each apprenticeship contract will include a document designated as "Exhibit A."

An Exhibit A is developed for each occupation associated with a program sponsor and included in the program standards. The Bureau approves the content of the Exhibit A through its authority to set local and state apprenticeship standards. The Exhibit A contains a synopsis of the following requirements of the apprenticeship, as approved by the Bureau, and in accordance with the program standards and Wis. Admin. Code Ch. 295.07.

Term of apprenticeship

The term may be based on competency, time, or a hybrid of the two. If timebased, then the number of hours, months or years necessary to complete the apprenticeship program are stated. If competency based, the Exhibit A includes a description of the skills to be attained and any on-the-job learning component. A hybrid program will state the number of hours to be spent by the apprentice on the job along with a description of the skills to be attained.

Probationary period

The period and stipulations of the probationary period, which can either be expressed in hours or months. School attendance The number of hours of paid related instruction and the related instruction provider.

Work process schedule

The basic job tasks of the apprenticeship program. For a time-based program, the approximate time the apprentice will spend on each work process. For a competency-based program, a description of the skill sets to be attained. A hybrid program will contain a combination of both. The schedule must be comprehensive enough to reflect the intent to train the apprentice in all primary job tasks of the related occupation. The schedule need not be

followed in the sequence outlined in the Exhibit A.

MINIMUM COMPENSATION TO BE PAID:

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be the base skilled wage rate stated above.

If the apprentice does not complete the term of the contract in the five (5) year period, the apprentice shall be paid at no less than 95% of the skilled rate until completed.

If the apprentice completes the prescribed work hours before completing the required schooling, the apprentice shall be held in the last period of apprenticeship until the apprenticeship is satisfactorily completed.

Period every	HVAC/R
1st period of 0 – 12 months of 1 – 1680	55%
2nd period of 13 – 24 months of 1681 – 3360 hours	65%
3rd period of 25 – 36 months of 3361 – 5040	75%
4th period of 37 – 48 months of 5041 – 6720	85%
5 th period of 49 – 60 months of 6721 – 8400 hours	95%
Completion of hours	100%

Upon completion of the on-the-job training work hours and the paid and unpaid school hours the apprentice must submit

an application for completion to the ABC of WI Apprenticeship Advisory Committee. Upon approval by the ABC of WI

Apprenticeship Advisory Committee and the BAS, the apprentice will be completed from the apprenticeship program.

Credit provisions

A description of any advanced standing work or education credit awarded to an apprentice and the wage commensurate with that advanced standing. Credit must be

applied at the start or during the term of the apprenticeship and the apprentice shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Special provisions

The special provisions describe additional stipulations or requirements of the apprenticeship program not contained elsewhere in the apprentice contract. For example, this section may detail additional unpaid instructional hours that the apprentice is required to take on their own time, required industry or employer certifications, or training courses mandated by the Bureau.

Associated Builders & Contractors of WI, Inc.
ELECTRICIAN (CONSTRUCTION)
824.261-010
TRADE INFORMATION

APPROVED: 2/27/2017

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time Based, which has been established to be **five years of not less than 8400 hours**. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 12 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be canceled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for **paid related instruction for a minimum of 576 hours** and satisfactorily complete the prescribed course material, unless otherwise approved by the Department. The employer must pay for related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

Schedule of Processes To Be Worked	Approximate Hours Min
A. CONDUIT, 2" AND LARGER - Thinwall, rigid, flexible assemblies, aluminum, plastic may include all layout, drilling, anchoring, digging, channeling, fabricating of hangers and rigging pertaining to the installation of the above, etc.	300
B. CONDUIT, 1.5" AND SMALLER - Thinwall, rigid, flexible assemblies, aluminum, plastic may include all layout, drilling, anchoring, digging, channeling, fabricating of hangers and rigging pertaining to the installation of the above, etc.	1500
C. OTHER RACEWAYS - Underfloor duct, cable tray, square duct, metal molding, ladder racks, and pull boxes - may include all layout, drilling, anchoring, digging, channeling, fabricating of hangers and rigging pertaining to the installation of the above, etc.	100
D. BUS DUCT, DISTRIBUTION EQUIPMENT UNDER AND OVERS 600 VOLTS AND DISTRIBUTION EQUIPMENT - Trolley duct, service duct, crane rails, and distribution Bus duct, termination and/or splicing of high voltage cable. Installation and connecting of cubicles, transformers, switch gear, service panels, sub panels, fuse panels and transformers - may include all layout, drilling, anchoring, digging, channeling, fabricating of hangers and rigging pertaining to the installation of the above, etc.	600
E. INSTALLATION OF WIRES AND CABLES - Wire, cables, non-metallic sheathed cable, armored cable, in conduit, trays, duct, racks, wiremold, fabricating, rigging, etc.	1000
F. INSTALLATION OF FINISH MATERIALS AND TRIM DEVICES - 1500 Assemble and install fixtures, switches, receptacles, electric heating equipment (e.g., baseboard heaters, valance heaters, radiant heaters, etc.)	
G. INSTALLATION AND WIRING OF CONTROL EQUIPMENT - Motor control equipment, relays, thermostats, indicators, tach generators, motion switches, process controls, limit switches, counters, timers, instruments, electronic speed controls,	400

humidity controls, micro switches, voltage controls, current controls, static controls and air conditioning equipment, etc.

H. SPECIALIZED - Wiring of specialized systems to include: sound systems, CRT and data systems, telephones, fire alarm systems, fiber optics, energy management systems, nurse call systems, closed circuit TV and street and highway lighting, etc. 1904

I. OTHER - Trenching, clean-up, handling of material, stock room, machinery installation, etc. 520

J. PAID RELATED INSTRUCTION 576

TOTAL 8400

MINIMUM COMPENSATION TO BE PAID:

1st period of 0 – 12 months of 1 – 1680 hours, satisfactory progress* at 45% of the base skilled wage rate

2nd period of 13 – 24 months of 1681 – 3360 hours, satisfactory progress* at least 45 hours of unpaid related instruction at 55% of the base skilled wage rate

3rd period of 25 – 36 months of 3361 – 5040 hours and satisfactory progress* at least 90 hours of unpaid related instruction at 65% of the base skilled wage rate

4th period of 37 – 48 months of 5041 – 6720 hours and satisfactory progress* at least 135 hours of unpaid related instruction at 70% of the base skilled wage rate

5th period of 49 – 60 months of 6721 – 8400 hours and satisfactory progress* at least 180 hours of unpaid related instruction at 75% of the base skilled wage rate

Base skilled wage rate _____ per hour.

*Satisfactory progress is defined as completing the minimum on the job hours; satisfactory progress on the job; satisfactory progress in paid related instruction and unpaid related instruction; current in first aid and CPR; current license; and compliance with the record keeping policy.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be the base skilled wage rate stated above.

If the apprentice does not complete the terms of the contract in the five (5) year period, the apprentice shall be paid at no less than 75% of the skilled rate until completed.

If an apprentice completes the prescribed work hours before completing the required paid related instruction, the apprentice shall be held in the last period of apprenticeship until the apprenticeship is satisfactorily completed.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work Credit: _____

School Credit: _____

Total Credit to be applied to the terms of the apprenticeship: _____

2

SPECIAL PROVISIONS: The apprentice shall obtain certification in First Aid and CPR and a minimum of a 10-Hour Safety course during the first 12 months of the contract. First Aid and CPR certifications must be kept current. The apprentice is required to take Arc Flash by the end of the second year and the Transition to Trainer course in the final year of the apprenticeship.

The apprentice must complete satisfactorily 200 hours of unpaid school hours, as prescribed by the ABC of WI Apprenticeship Advisory Committee. **The apprentice shall obtain at least 45 hours per year in unpaid related instruction.** The 200 hours of unpaid related instruction must include Electrical code (30 hours minimum), Arc Flash (4 hour minimum), and an Electrical Exam Prep Course. The remainder of the 200 hours may include such topics as: PLC, Motor Controls, Photovoltaic, Green Energy, Blueprint Reading, Fire Safety, Relay Logic, Computer Skills, Electronics, Instrumentation, Data Communications, Transit & Builders Level, Electrical Circuits, Electrical Safety, Electronic Controls, Fiber Optics, Isometric Drawing, Welding, and Rigging.

Apprentices shall attend at least 90% of scheduled paid related instruction each semester. In the event paid related instruction is missed, the apprentice shall make up the content missed as prescribed by the ABC of WI Apprenticeship Advisory Committee.

Apprentices must obtain a valid credential from the Wisconsin Department of Safety and Professional Services and maintain it throughout the apprenticeship. All registered apprentices in Wisconsin are required to take and pass the State Electrical Journey-Worker exam prior to the completion of his or her Apprentice Contract. All work shall be performed under direct skilled worker supervision, except fifth year apprentices who can be provided general supervision. Supervision should not be of such a nature as to prevent the development of responsibility and initiative. Under no circumstance shall an apprentice supervise another apprentice.

First year apprentices may not work on or be exposed to live circuits or systems.

The apprentice is expected to purchase the tools of the trade by the completion of the first year.

The Apprentice must submit an Application for Completion to the ABC of WI Apprenticeship Advisory Committee upon completion of the on-the-job training work hours, paid and unpaid school hours, and passing of the State Journey-Worker Exam. Upon approval by the ABC of WI Apprenticeship Advisory Committee and the BAS, the apprentice will be completed from the apprenticeship program.

Apprenticeship Compensation – Electrical

Electrical Apprentices will get the 100-hour vacation option.

Steamfitter Apprentices are treated like US-Craftworkers and will not get personal holiday hours.

1st period of 0 – 12 months of 1 – 1680 hours – 55% prevailing rate

2nd period of 13 – 24 months of 1681 – 3360 hours – 65% prevailing rate

3rd period of 25 – 36 months of 3361 – 5040 hours – 75% prevailing rate

4th period of 37 – 48 months of 5041 – 6720 hours – 85% prevailing rate

5th period of 49 – 60 months of 6721 – 8400 hours – 95% prevailing rate

Completion – 100% prevailing rate

2025 prevailing rate at 100 hours for the Electrician is \$49.88

The amounts below are subject to change with the increase in the Craftworkers/Trades pay plan. * 55% – \$27.43

65% – \$32.42

75% – \$37.41

85% – \$42.40

95% – \$47.39

100% – \$49.88

*Electrical Apprentices are treated like US-Craftworkers. The Electrical Apprentices will get all Craftworkers/Trades pay plan increases on the effective dates with retro pay if needed.