

**Board of Electricity****Proposed Permanent Rules Modifying Electrical Board Training Requirements****3800.3520 EXAMINATION; MINIMUM EXPERIENCE REQUIREMENTS FOR LICENSURE; ACCEPTABLE EXPERIENCE.**

*[For text of subparts 1 to 3, see Minnesota Rules]*

Subp. 4. **Acceptable experience for certain categories in certain situations.** Experience in the categories of planning for the installation of wiring, apparatus, and equipment for light, heat, and power; laying out for the installation of wiring, apparatus, and equipment for light, heat, and power; supervising the installation of wiring, apparatus, and equipment for light, heat, and power; and wiring and installing electrical wiring, apparatus, and equipment for light, heat, and power is acceptable in the situations described in items A to ~~E~~ D.

*[For text of items A and B, see Minnesota Rules]*

~~C.~~ Experience while performing electrical work in Minnesota for an employer who is exempt from licensing when the work is exempt from inspection under Minnesota Statutes, section 326B.36, or when the work is performed on federal property by a federal employee, if the department has determined in either situation that the experience is substantially equal to that acquired in performing work while in the employ of a licensed contractor. The determination shall be made after a personal inspection by not less than two department representatives on the premises where the applicable work was performed.

~~D.~~ C. Experience while performing electrical work outside of Minnesota, which the department has determined is substantially equivalent to the work performed while in the employ of a licensed contractor in Minnesota. This determination must be based on a certification by the employer for the type of work performed.

~~E.~~ D. Experience while performing electrical work in the armed forces of the United States which the department has determined is substantially equivalent to work

performed while in the employ of a licensed contractor in Minnesota. This determination shall be based on a certification by the military for the type of work performed.

*[For text of subpart 5, see Minnesota Rules]*

## **ELECTRICAL TRAINING PROGRAMS**

### **3800.4000 PURPOSE.**

Parts 3800.4000 to 3800.4055 establish requirements for approval of programs that must be used to fulfill the experience credit requirements for electrical license applicants.

### **3800.4005 DEFINITIONS.**

Subpart 1. **Scope.** For purposes of parts 3800.4000 to 3800.4055, the terms defined in this part have the meanings given.

Subp. 2. **Advanced standing.** "Advanced standing" means credit toward program completion for prior education recognized by a postsecondary program through a developed procedure, including transfer of credits for courses that are at least 80 percent similar to those in an approved program, and credit by examination for up to 25 percent of program courses.

Subp. 3. **Approval period.** "Approval period" means a time frame beginning with the approval beginning date and extending until the program is discontinued or commissioner approval is removed or not continued through the reapplication process.

Subp. 4. **Board.** "Board" means the Board of Electricity.

Subp. 5. **Course.** "Course" means a part of a program that consists of an individual knowledge or skill area, or part of a larger knowledge or skill area.

Subp. 6. **Electrical work.** "Electrical work" means the installing, altering, repairing, planning, or laying out of electrical wiring, apparatus, or equipment for light, heat, power, or other purposes. The installing, altering, repairing, planning, or laying out of electrical

wiring apparatus or equipment for light, heat, power, or other purposes includes but is not limited to the performance of any work governed by Minnesota Statutes, section 326B.35.

Subp. 7. **Independent study.** "Independent study" means student learning effort within the specific program content that is outside of lecture, shop, or lab hours and does not require student and instructor contact.

Subp. 8. **Survey.** "Survey" means collecting and analyzing information to assess compliance with parts 3800.4000 to 3800.4055. Information must be analyzed by multiple methods, including review of requested information and materials, on-site evaluation, or interviews and conferences with program administrators, instructors, or students.

### **3800.4010 TWO-YEAR ELECTRICAL PROGRAM.**

To qualify for approval, a two-year electrical program must be a postsecondary program that awards a diploma or an associate of applied science degree at completion and meets the requirements of parts 3800.4000 to 3800.4055. Satisfactory completion of an approved two-year electrical program fulfills the 12-month experience credit allowance for a Class A journeyworker electrician, power limited technician, or maintenance electrician license applicant according to part 3800.3520, subpart 5, items B, E, and I, and Minnesota Statutes, section 326B.33, subdivisions 2, paragraph (b), and 7, paragraph (b).

### **3800.4015 POWER LIMITED TECHNICIAN PROGRAM.**

To qualify for approval, a power limited technician program must either be a two-year electrical program described in part 3800.4010 or other program that has at least 500 hours of student and instructor contact time meeting the program content described in part 3800.4050. Approval for experience credit for programs other than a two-year electrical program is based on increments of 100 hours, or major fraction thereof, of student and instructor contact time up to a maximum of 2,000 hours.

**3800.4020 APPLICATION FOR PROGRAM APPROVAL.**

Subpart 1. **Content.** An application for approval of a program must meet each of the requirements in items A to G.

A. The application must be in a format provided by the commissioner and contain complete, current, and accurate information.

B. The application must include a syllabus for each program course.

C. The application must include a detailed written description of how the program meets the required program content.

D. The application must identify course instructors and their qualifications.

E. The information provided in the application must be verifiable by survey.

F. The application must identify a beginning date corresponding to an initial student enrollment date. Students enrolled after the beginning date who successfully complete an approved program within the approval period are eligible for experience credit.

G. The application must be signed by the administrator and department head of a program or another official representative of the applicant.

Subp. 2. **Processing.** The commissioner shall review all applications. Items A to E apply to all applications.

A. Incomplete applications must be immediately returned to the applicant.

B. Upon review of completed applications, including completion of a survey, any deficiencies must be noted and identified to the applicant.

C. If no deficiencies are noted or all identified deficiencies have been corrected, the commissioner shall recommend approval to the board.

D. If the applicant fails to correct identified deficiencies, the commissioner shall recommend disapproval to the board.

E. An applicant may request a hearing before the board to appeal disapproval of a program.

#### **3800.4025 REPORTING AND REAPPLICATION FOR APPROVAL.**

A. By July 1 of each year, the administrator of a program approved for experience credit shall provide an annual report to the commissioner. The annual report must include a copy of course syllabi for approved programs, a detailed description of new courses or courses modified over ten percent, and identification and qualification of instructors, including instructor development. The annual report must be signed by the administrator and department head of the program or another official representative of the program provider.

B. An approved program must be resubmitted for approval by July 1 of the fifth year from the last approval date. At the commissioner's discretion, the commissioner may modify the initial time period for resubmission to achieve review of approximately 20 percent of approved programs each year.

C. The administrator of an approved program shall provide information as part of a survey upon request of the commissioner.

D. The administrator of an approved program shall notify the commissioner when an approved program is discontinued.

#### **3800.4030 REMOVAL OF APPROVAL.**

A. The board shall remove approval of a program based on a determination by survey that the program does not meet the requirements for approval.

B. The board may remove approval of a program if the administrator of an approved program fails to provide the annual report according to part 3800.4025.

C. The board may remove approval of a program if the administrator of an approved program fails to resubmit the program for reapplication by July 1 of the fifth year from the last approval date or the year assigned by the commissioner as allowed by part 3800.4025, item B.

**3800.4035 VERIFICATION OF COMPLETION.**

Upon inquiry by the commissioner, the provider of an approved program shall provide verification that an applicant has completed an approved program.

**3800.4040 TWO-YEAR ELECTRICAL PROGRAM CONTENT.**

Subpart 1. **Contact time.** A two-year electrical program shall consist of 2,000 or more hours of student and instructor contact time and is subject to the following:

A. up to 200 hours of independent study may be substituted for student and instructor contact time;

B. a minimum of 1,600 hours of student and instructor contact time must be technical electrical instruction;

C. at least 30 percent but not more than 40 percent of the technical electrical student and instructor contact time must be lecture hours, and the remainder shop or lab hours;

D. intern programs, whether internal or external, do not satisfy the contact time requirement under this subpart; and

E. a student may receive advanced standing credit for up to one-third of the courses of an approved program.

Subp. 2. **Attendance policy.** A two-year electrical program must include an attendance policy that requires students to attend a minimum of 95 percent of each required program course. The program must include a provision for students to retake courses or make up

portions of courses when the student does not attend 95 percent or more of each required program course. Attendance records must be kept at the course level.

Subp. 3. **Technical content.** A two-year electrical program must include courses that cover the following knowledge and skill areas:

- A. electrical theory;
- B. electronic theory;
- C. lighting systems;
- D. heating and cooling systems;
- E. motors;
- F. generators;
- G. transformers;
- H. panelboards and switchboards;
- I. overcurrent devices;
- J. grounding;
- K. motor controls;
- L. electronic controls;
- M. electrical code;
- N. electrical test equipment and troubleshooting;
- O. specification and blueprint reading;
- P. installation and application of electrical materials and equipment;
- Q. wiring methods;

- R. conductors and cables;
- S. tools, materials, and handling;
- T. fire alarm systems;
- U. communication systems;
- V. alarm systems;
- W. data systems;
- X. electrical and job site safety;
- Y. related mathematics; and
- Z. related general education.

**3800.4045 QUALIFICATIONS OF INSTRUCTORS FOR TWO-YEAR PROGRAMS.**

Subpart 1. **Generally.** An instructor for a two-year electrical program shall meet the requirements in subparts 2 and 3.

Subp. 2. **Licensing, experience, and education.** An instructor shall:

A. hold a current license issued by the Department of Labor and Industry as a Class A master electrician or a Class A journeyworker electrician;

B. hold a current license issued by an electrical licensing authority in the state where the school is located if the state has a reciprocal agreement with the Department of Labor and Industry for either master or journeyworker licenses;

C. have a Bachelor of Science degree in electrical engineering and have 4,000 hours of experience performing electrical work;

D. have an Associate of Applied Science degree in electrical construction or maintenance, or both, and have 6,000 hours of experience performing electrical work;

E. have a two-year diploma for completing a two-year electrical construction program or maintenance program, or both, and have 6,000 hours of experience performing electrical work; or

F. for courses limited to specific technical or general education areas, other than general wiring methods or the application of electrical codes, be a technical expert based on special training or certification or accreditation in the specific knowledge or skill area.

Subp. 3. **Recent initial experience.** Except for instructors of courses in subpart 2, item F, a minimum of 2,000 hours of the required instructor experience must have been in the five years prior to the application for program approval or the instructor's employment date, whichever is later, and consist of either:

A. a minimum of 2,000 hours of experience performing electrical work; or

B. (1) up to 1,500 hours of experience credit for instruction based on a formula in which one hour of instruction equals two hours of experience credit; plus (2) a sufficient number of hours of experience performing electrical work to total 2,000 hours.

### **3800.4050 POWER LIMITED TECHNICIAN PROGRAM CONTENT.**

Subpart 1. **Contact time.** A power limited technician program shall consist of a minimum of 500 hours of student and instructor contact time and is subject to the following:

A. up to ten percent of the approved hours may be independent study;

B. a minimum of 80 percent of the approved hours must be technical electrical instruction; and

C. intern programs, whether internal or external, do not satisfy the contact time requirement under this subpart.

Subp. 2. **Attendance policy.** A power limited technician program must include an attendance policy that requires students to attend a minimum of 95 percent of each required

program course. The policy must include a provision for students to retake courses or make up portions of courses when the student does not attend 95 percent or more of each required program course. Attendance records must be kept at the course level.

Subp. 3. **Technical content.** A power limited technician program must include courses that cover the following knowledge and skill areas:

- A. electrical theory;
- B. electronic theory;
- C. Class 2 and Class 3 power supplies;
- D. Class 2 and Class 3 circuits;
- E. grounding;
- F. electrical code;
- G. electrical test equipment and troubleshooting;
- H. specification and blueprint reading;
- I. wiring methods;
- J. conductors and cables;
- K. tools, materials, and handling;
- L. electrical and job site safety;
- M. related mathematics;
- N. related general education; and
- O. technology circuits or systems.

A minimum of 30 percent but not more than 50 percent of the total student and instructor contact time must be on technology circuits or systems as defined in Minnesota Statutes, section 326B.31, subdivision 29.

**3800.4055 QUALIFICATIONS OF INSTRUCTORS FOR POWER LIMITED TECHNICIAN PROGRAMS.**

Subpart 1. **Generally.** An instructor for a power limited technician program shall meet the requirements of subparts 2 and 3.

Subp. 2. **Licensing, experience, and education.** An instructor shall:

A. hold a license as issued by the Department of Labor and Industry as a Class A master electrician, Class A journeyworker electrician, or power limited technician;

B. hold a current license issued by an electrical licensing authority in the state where the school is located if the state has a reciprocal agreement with the Department of Labor and Industry for either master, journeyworker, or power limited technician, or equivalent licenses;

C. have a Bachelor of Science degree in electrical or electronic engineering and have 3,000 hours of experience in engineering, planning, laying out, supervising, or installing technology system wiring;

D. have an Associate of Applied Science degree in electrical construction or maintenance, or both, and have 4,000 hours of experience performing electrical work;

E. have a two-year diploma for completing a two-year electrical construction or maintenance program, or both, and have 4,000 hours of experience performing electrical work;

F. have an Associate of Applied Science degree in technology systems, and have 4,000 hours of experience performing technology system work;

G. have a two-year diploma for completing a two-year technology systems program, and have 4,000 hours of experience performing technology system work;

H. be a certified instructor for a nationally recognized training program; or

I. for courses limited to specific technical or general education areas, other than general wiring methods or the application of electrical codes, be a technical expert based on special training or certification or accreditation in the specific knowledge or skill area.

Subp. 3. **Recent initial experience.** Except for instructors of courses in subpart 2, item I, a minimum of 2,000 hours of the required instructor experience must have been in the five years prior to the application for program approval or the instructor's employment date, whichever is later, and consist of either:

A. a minimum of 2,000 hours of experience performing electrical work, including technology system work; or

B. (1) up to 1,500 hours of experience credit for instruction based on a formula in which one hour of instruction equals two hours of experience credit; plus (2) a sufficient number of hours of experience performing electrical work to total 2,000 hours.