

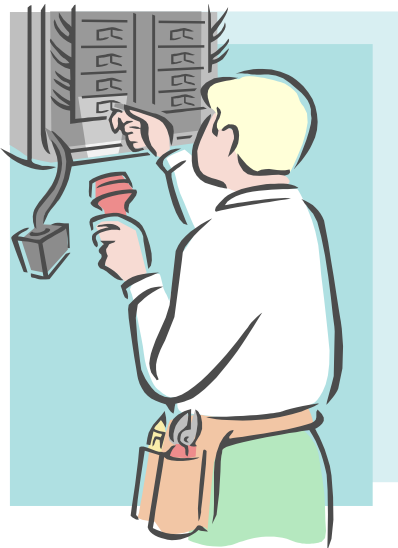


SIOUX CITY JOINT ELECTRICAL APPRENTICESHIP  
ASSESSMENT WORKBOOK  
FOR  
CAREER COUNSELORS AND OTHERS

# SCJATC ASSESSMENT WORKBOOK

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## **What is Apprenticeship?**

The electrical apprenticeship program combines on-the-job training (OJT) with classroom instruction to train individuals to become skilled electricians. OJT is provided through paid work in the field on construction sites, supervised by journeyman electricians. The commercial apprenticeship requires 5 years to complete. After completing all the requirements, the apprentice “journeys out,” and is then a journey-level craftsperson.

Apprenticeship wages start at 45% of journey-level wage depending on the apprenticeship selected. Wage increase begins at the six month mark and then on a yearly basis once the school and OJT hours are met.

In the apprenticeship, apprentices work on a job site during the day and attend school once a week throughout their apprenticeship. They generally follow the academic calendar, which means apprentices do not attend classes in the summer. This fits well with high work demand periods, allowing apprentices to work the longer summer hours.

In the electrical apprenticeship apprentices are assigned to employers by the Sioux City Joint Electrical Committee (SCJATC). The work may be in the local area and in some cases maybe outside the local jurisdiction.

Apprenticeship programs and their standards are developed by their training committees, then approved by the National Joint Apprenticeship and Training Committee (NJATC) and registered at the Department of Labor, Office of Apprenticeship.

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## How Does Electrical Apprenticeship Pay? (As of June 1 2014)

<u>Where</u>	<u>Starting Wage</u>	<u>Graduating Wage</u>	<u>Length of Program</u>
<u>Sioux City (commercial)</u>	\$12.31	\$30.78	5 years

### Requirements for the Electrical Apprenticeship Program:

#### Valid Driver's License:

The electrical apprenticeship program *requires* a valid driver's license in order to apply. This is used for two reasons; first, an apprentice or journey level worker may be asked to drive the company car to pick up materials or run other errands during the work day. Question 13 of the Construction Skills Assessment Test (pages 8-10) ask clients to indicate whether or not they have a valid license.

#### Reliable Transportation:

Work takes place in many locations, a skilled construction worker may work on a site in their respective area one month and somewhere else the next. In some cases, a worker must carry heavy tools to and from work. For those reasons, reliable transportation is an important key to success in the trade. Although

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having access to a car to drive to work and school is not a requirement, it is very helpful and highly recommended.

## **High School Diploma or GED:**

The electrical apprentice requires a high school diplomas or GED in order to apply. If your student is still in high school, it is recommended that they enroll in some type of construction courses.

## **English Language:**

The electrical apprenticeship requires to read, write, speak and understand English. Should someone be interested in the electrical apprenticeship and is not fluent in the English language, it is recommended that they attend an educational institution to broaden their language skills.

## **18 Years or Older:**

The electrical apprenticeship program requires applicants to be 18 years of age or older. It is possible to apply at 17 years of age, but they cannot go to work until they reach the age of 18.

## **Requirements for the Electrical Apprenticeship Program Continued:**

### **Math Skills:**

To apply for the electrical apprenticeship you must have obtained a passing grade in either one year of high school algebra or one semester of college algebra or completed an online math course sponsored by the NJATC. To enroll, NJATC's website is [www.NJATC.org](http://www.NJATC.org).

Questions 3 through 8 on the Construction Skills Assessment Test are basic math questions to assess your client's math skills. If your applicant is not able to answer them correctly, then math tutoring may be helpful for them to apply and succeed in the apprenticeship.

### **Aptitude Test:**

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All applicants must achieve a test score of 4 or better to have an oral interview.

## **Drug & Alcohol Screens:**

Construction can be very dangerous, and safety is a high priority for all apprenticeship programs. Therefore the electrical apprenticeship program requires a drug test as part of the application process. In addition, during the apprenticeship program, employers randomly screen worker for drugs and/or alcohol.

## **Criminal Records:**

Unlike in many industries, a criminal record is generally not a barrier to entry and success in the electrical apprenticeship. The Trust doesn't perform a criminal background check. However, an apprentice or journey level worker may be barred from working for a specific employer or a particular job due to a criminal record. Usually, disqualification occurs only when the crime that was committed is applicable to the specific kind of work being done. Sometimes a construction worker with a criminal record will be able to work on a job, but not in particular physical areas of that job.

Most government employers will not hire workers with any kind of criminal record. In addition, employers who ordinarily do not screen for criminal records may be required for projects they do not contract to government agencies.

## **The Construction Work Environment:**

For people skilled with their hands or those who love seeing their work as a finished project construction trades can be rewarding. They pay well enough to support a family and offer good benefits. However, there are a few things a person should know before starting an apprenticeship.

Work in the construction trades can be physically demanding. Workers often carry heavy loads, lift and move machinery, climb ladders, work at great heights, crawl on their knees, squeeze into tight spaces, and walk across slippery or unstable surfaces. Most trades involve the use of tools and machinery that can cause serious and even fatal injuries when not properly operated.

Working outdoors can be unpleasant at times; unsheltered work sites will be hot in the summer sun, cold and wet at other times of the year. Indoors, workers may be exposed to sweltering heat, dampness or cold. Trade workers

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need to invest in clothing that protects them from the elements and keeps them comfortable in a variety of conditions.

Some outdoor work, such as painting, cannot be done when the weather is too cold or too wet. Workers in weather sensitive trades can expect periods of unemployment in the winter. During summer months outdoor trades may take advantage of the extended daylight hours. Shifts during these times can run up to 12 hours per day, and work may be scheduled around the clock.

Construction sites can be busy, noisy places. There is not always time for supervisors to explain tasks slowly or politely. It is not uncommon for supervisors to yell orders at their workers, or to become upset when tasks are carried out incorrectly. It is important to remember that as a tradesperson your work will be continually evaluated for quality. If it does not meet the required standards you may be asked to do it over again, or may be dismissed from the project.

Apprentices just starting out will not possess the skills needed to do most of the work. Therefore, beginning apprentices spend a lot of their time doing cleanup work. This can involve hosing off equipment, clearing debris, shoveling dirt, mixing up compounds, and disposing of hazardous materials. As time on the job and training progresses an apprentice will be able to perform a greater variety of tasks.

Since the construction trades are heavily tied to new construction projects, they are highly dependent in a good economy. When times are tight, there are few construction projects to go around. Regional recessions can result in significant periods of unemployment. During these times workers may choose to relocate or take a second job to make ends meet.

Apprentices who find themselves laid off can apply for unemployment benefits. However, these benefits are generally not enough to sustain a person for a prolonged period of time. Even trades unaffected by the weather and economy experience layoffs. It is not unusual for a worker to finish a project and then be off a few days while waiting for a new assignment. They need to be able to live on less than their regular monthly income so that savings can be set aside.

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## Interest Inventory:

Circle 1 if you do not like to do these things. Circle 2 if you think these things are okay. Circle 3 if you like to do these things.

Work with your hands	1	2	3
Make repairs to your home	1	2	3
Work outside	1	2	3
Do the kind of work where you can see and touch the results	1	2	3
Solve problems or do puzzles	1	2	3

**ADD UP YOUR SCORE:** \_\_\_\_\_

If your score is 10 or more, the electrical apprenticeship may be for you!

Are you a person who likes challenges?	YES	NO
Are you in good shape?	YES	NO
Are you a person who needs to make more than \$10.00 an hour?	YES	NO
Are you a person who needs health care and other benefits?	YES	NO
Do you want to learn more about buildings and construction trades?	YES	NO

How many times did you circle yes? \_\_\_\_ How many times did you circle no? \_\_\_\_  
If you circled YES more than NO, then a career in the building and construction trades may be right for you!



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## Interest Inventory Continued:

Many of the things you already do may have prepared you for the building and construction trades. Below, circle all of the things you have done already:

Worked in construction

Finished high school or GED

Got your driver's license

Used a sewing pattern

Worked on your car, or someone else's  
car

Worked out playing sports

Done crafts like knitting, sewing, or  
drawing

Used a recipe

Went to a trade school program for  
vocational skills

**ADD UP THE NUMBER OF TASKS YOU CIRCLED: \_\_\_\_\_**

If you circled three or more, than a career in the building and construction trades might be right for you!

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## Construction Skills Assessment:

1. You get up in the morning and go out to start your car to go to work. Your car doesn't start. What do you do?
  - a) Call in sick
  - b) Raise the hood and fix it
  - c) Get someone to drive you to work
  - d) Call in and tell your boss your car doesn't start
2. You are assigned to work with a crew of three other people unloading a truck. One of the workers yells at you to hurry up. What do you do?
  - a) Yell back
  - b) Hurry up
  - c) Keep on working at the pace you are working at
  - d) Tell the group of workers, "Let's observe safe working habits."
3. At Maria's café, Jose ordered a fish dinner for \$4.75, a cup of coffee for \$.65 and a piece of pie for \$1.15. The tax on his bill was \$.54. What is the total bill for Jose's meal including tax?
  - a) \$6.19
  - b) \$7.09
  - c) \$7.19
  - d) \$6.09
4. Reduce  $\frac{64}{84}$ :
  - a)  $\frac{5}{8}$
  - b)  $\frac{12}{16}$
  - c)  $\frac{7}{8}$
  - d)  $\frac{16}{21}$
5. Ann is paying \$57.75 per month for 16 months for new furniture. What is the total price she is paying for the furniture?
  - a) \$869.75
  - b) \$924.00
  - c) \$1024.00
  - d) \$928.25
6. Change 788 to a mixed number and reduce:
  - a)  $9 \frac{1}{9}$
  - b)  $8 \frac{1}{9}$
  - c)  $9 \frac{3}{4}$
  - d)  $8 \frac{7}{8}$

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7. Change  $9/10$  to a percent:
  - a) 9%
  - b) .09%
  - c) 90%
  - d) 900%
8. Multiply  $2/3$  by  $3/4$ :
  - a)  $3\ 1/2$
  - b)  $1/4$
  - c)  $1/2$
  - d)  $1\ 1/4$
9. I am here today because:
  - a) I want to work in construction
  - b) I came with my friend
  - c) I need a job
  - d) I'm interested in a career in construction
10. If I got an apprenticeship and got a job in construction, my family would:
  - a) Be proud of me
  - b) Support my decision
  - c) Question my decision
  - d) Ask me to look for other work
11. Construction can be physically demanding, can you handle this?
  - a) I can do this kind of work
  - b) I think I can do this kind of work
  - c) I am willing to try
  - d) I'm not sure I can do hard physical work
12. My image of a construction worker is:
  - a) Dirty-gritty individual
  - b) Hard working individual
  - c) A physically strong individual
  - d) Male
13. The electrical apprenticeship requires a valid driver's license in order to apply:
  - a) I have a valid driver's license
  - b) My driver's license is suspended, but I am willing to do what I have to, to get it back
  - c) I can't drive
  - d) I don't own a car

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## Construction Skills Assessment Answer Key:

1. You get up in the morning and go out to start your car to go to work. Your car doesn't start. What do you do?
  - a) Call in sick
  - b) Raise the hood and fix it
  - c) Get someone to drive you to work
  - d) Call in and tell your boss your car doesn't start

**Preferred Answers: B or C**
2. You are assigned to work with a crew of three other people unloading a truck. One of the workers yells at you to hurry up. What do you do?
  - a) Yell back
  - b) Hurry up
  - c) Keep on working at the pace you are working at
  - d) Tell the group of workers, "Let's observe safe working habits."

**Preferred Answers: C or D**
3. At Maria's café, Jose ordered a fish dinner for \$4.75, a cup of coffee for \$.65 and a piece of pie for \$1.15. The tax on his bill was \$.54. What is the total bill for Jose's meal including tax?
  - a) \$6.19
  - b) \$7.09
  - c) \$7.19
  - d) \$6.09

**Correct Answer: B**
4. Reduce  $64/84$ :
  - a)  $5/8$
  - b)  $12/16$
  - c)  $7/8$
  - d)  $16/21$

**Correct Answer: D**
5. Ann is paying \$57.75 per month for 16 months for new furniture. What is the total price she is paying for the furniture?
  - a) \$869.75
  - b) \$924.00
  - c) \$1024.00
  - d) \$928.25

**Correct Answer: B**
6. Change 788 to a mixed number and reduce:
  - a)  $9 \frac{1}{9}$

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- b)  $8 \frac{1}{9}$   
c)  $9 \frac{3}{4}$   
d)  $8 \frac{7}{8}$   
**Correct Answer: C**
7. Change  $\frac{9}{10}$  to a percent:  
a) 9%  
b) .09%  
c) 90%  
d) 900%  
**Correct Answer: C**
8. Multiply  $\frac{2}{3}$  by  $\frac{3}{4}$ :  
a)  $3 \frac{1}{2}$   
b)  $\frac{1}{4}$   
c)  $\frac{1}{2}$   
d)  $1 \frac{1}{4}$   
**Correct Answer: C**
9. I am here today because:  
a) I want to work in construction  
b) I came with my friend  
c) I need a job  
d) I'm interested in a career in construction  
**Preferred Answers: A or D**
10. If I got an apprenticeship and got a job in construction, my family would:  
a) Be proud of me  
b) Support my decision  
c) Question my decision  
d) Ask me to look for other work  
**Preferred Answers: A or B**
11. Construction can be physically demanding, can you handle this?  
a) I can do this kind of work  
b) I think I can do this kind of work  
c) I am willing to try  
d) I'm not sure I can do hard physical work  
**Preferred Answers: A, B or C**
12. My image of a construction worker is:  
a) Dirty-gritty individual  
b) Hard working individual  
c) A physically strong individual  
d) Male  
**Preferred Answer: B**

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13. The electrical apprenticeship requires a valid driver's license in order to apply:

- a) I have a valid driver's license
- b) My driver's license is suspended, but I am willing to do what I have to, to get it back
- c) I can't drive
- d) I don't own a car

**Preferred Answer: A or B**



**Some Commonly Asked  
Questions About Apprenticeship**

**Questions Commonly Asked About Apprenticeship:**

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1. What is an apprentice?
  - » An apprentice is a qualified person of legal working age, who has entered into a written agreement with an employer, under which the employer is to provide an opportunity for the apprentice to learn an apprentice able occupation
2. What is an apprenticeship?
  - » Apprenticeship is a unique, voluntary training system through which individuals acquire trade and craft skills with periodic classroom instruction in technical subjects related to work requirements. The training design provides for learning all required practical and theoretical skills and knowledge for the chosen skilled occupation. Practical aspects of work are mastered on the job as apprentices are rotated through all phases of their particular occupations. Theoretical aspects of work are mastered during related subject's instruction in the classroom. Related instruction continues throughout the apprenticeship term and provides an opportunity to consider in depth the underlying principles of job activities. This arrangement of on the job classroom instruction is a standard part of typical apprenticeship indenturing agreements. It ensures the individual by providing for learning the complete range of skills and knowledge during training.
3. How does federal vocational legislation define "apprenticeship training program?"
  - » "A program registered with the U.S. Department of Labor or the State apprenticeship agency in accordance with the Act of August 16, 1937, commonly known as the National Apprenticeship Act, which is conducted or sponsored by an employer, a group of employer, or a joint apprenticeship committee representing both employers and a union, and which contains all terms and conditions for the qualification, recruitment, selection, employment, and training for apprentices."



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4. Is an employer required to accept apprenticeship credit earned in the Armed Forces or from other sources?
  - » No, however many companies generally will allow some credit based on bona fide work records provided by either the previous employer or prospective employee. In fact, credit may be given on past employment even if the past employer was not participating in a registered apprenticeship program. Prospective employer may require testing to verify the potential employee's performance level.
5. Must public schools or postsecondary institutions that offer apprenticeship related training is registered with the Bureau of Apprentice and Training?
  - » No.
6. Are apprentices employed?
  - » Yes, apprentices must be full time or near full time employees of the company to which they are apprenticed. However, in the event of school-to-apprentice programs, registered apprentices may be part time. Apprenticeship activities may cease for the apprentice if either laid off or unemployed. Cessation or continuance of apprenticeship activities may depend on length of time or layoff of unemployment.
7. What rate of pay do apprentices receive?
  - » Usually the wage scale begins at 40%-50% of a journeyperson's rate and increases progressively with satisfactory completion of work assignments and training segments. Near the end of the apprenticeship term, pay ranges from 90-95% of the full journeyperson rate.
8. Who directly supervises apprentices working on the job?
  - » Apprentices are directly supervised by journeypersons. The ratio of apprentices assigned to a journey person is dependent on the trade or craft involved, union contract and other agreements.
9. What is related training?

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» Related instruction is the “classroom” portion of apprenticeship and is an integral part of the apprenticeship program. It provides each apprentice with the theoretical and technical knowledge based necessary to become a successful journey person. It also provides additional practice and useful examples of job related skills and knowledge at work. All registered programs include related subjects instruction. The National Apprenticeship and Training Standards require that a minimum of 44 hours per year of apprenticeship training be provided to each trainee in related and supplementary subjects. This period of time can be increased by trade and craft standards or by program sponsors if content warrants the increase. Some industries require as much as 200 to 300 hours yearly in related subjects study by apprentices. Some states require all related training to be provided by the public schools/institutions.

### 10. What are the subjects taught in related training?

- » The contents of subjects taught during related training, like the number of hours required, varies by trade or craft. In general the kinds of subjects taught include;
- » The theory, principles and technical knowledge needed on the job
- » Auxiliary information that assists workers to better accept and discharge their responsibilities.
- » Occasional manipulative skills that are important to the craft or trade but are not provided conveniently in the apprentices on-the-job training. Frequently this means that related subjects instruction includes the principles, concepts, and information that apprentices must know and use from subject matter such as mathematics, general physical sciences, safety, basic measurement, and blueprint reading as well as the study of trade specific material and work processes and procedures.
- » In addition, related instruction helps to ensure that workers can communicate effectively in job specific ways can work effectively in

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organizations, and have knowledge about the apprenticeship system. However, regardless of the trade, craft or situation, the subject matter is current to job demands, practical, and directly useful in working in the craft of trade.

11. Is related training required of an apprentice?
  - » Yes. The arrangement of on-the-job and related training is a standard part of typical apprenticeship indenturing agreements.
12. Must an apprentice complete the program of related training?
  - » In order to be certified as a Journey person by the Bureau of Apprenticeship and training, an apprentice must attend and successfully complete the program of related instruction.
13. How long does related training last?
  - » Related training continues throughout the apprenticeship term.
14. How many hours of related training are required per year?
  - » A minimum of 144 hours, depending on the craft or trade. Many programs exceed 200 hours.
15. Who determines related training curriculum?
  - » The sponsor of the program establishes training curriculum. Some trades and crafts with national associations or unions provide nationally recognized curriculum; however, such curriculum may be tailored to the local level needs of the program.
16. Do apprentices get paid for attending related training classes?
  - » Generally not if the training takes place after normal work hours. If the apprentice attends related training during regular work hours, some form of pay is usually provided. They will be either directly compensated for the time or will be allowed to draw unemployment through the Department of Employment Services of the State of Iowa.
17. What is a program sponsor?
  - » The program sponsor can be individual employers, groups of employers or combinations of employers and unions. Combinations of equal numbers of employers and unions are called joint labor

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management apprenticeship committee. The term often is shortened to Joint Apprenticeship Committee (JAC) or Joint Apprenticeship and Training Committee. (JATC) The latter term, JATC applies if the committee administers a journey person training program to upgrade skills in addition to directing an apprentice program. Committees may represent labor-management interests at the national, state, or local level. Program sponsors may be governmental agencies at all levels, including universities and the military. In Iowa program sponsors represent all types of business and industry throughout the State. Most sponsors are not affiliated with organized labor, employ less than 50 employees, locally owned and training one to four apprentices at one time. Most have no training department or training personnel.

18. What are some of the responsibilities of a program sponsor?

- » The sponsor sets policy concerning the conduct of the program. The sponsor's jurisdiction includes selecting and indenturing apprentices, supervising training, establishing training curriculum and certifying apprentices as journeyperson upon completion of the program.

19. What is the Bureau of Apprenticeship and Training?

- » It is the agency of the United States Department of Labor that stimulates and assists industry in the development, expansion, and improvement of apprenticeship and training programs. The Bureau's principal functions are to encourage the establishment of sound apprenticeship and training programs and to provide technical assistance to industry in setting up such programs.

20. What is the role of the U.S. Bureau of Apprenticeship and Training in apprenticeship?

- » The federal role, as authorized by the National Apprenticeship Act of 1937, is to promote labor standards that safeguard the welfare of apprentices and to guide, improve and assist apprenticeship. The Bureau of Apprenticeship and Training is also responsible for registering apprenticeship programs and individual apprentices.

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21. What are the educational requirements of apprentices?
- » Requirements vary depending upon the apprentice able trade of craft. Some require very specific educational requirements; however, most require a high school diploma or its equivalent.
22. Who pays for the apprentice program?
- » The program sponsor plans, administers and pays for the program.
23. What is a journey person?
- » A worker who has satisfactorily completed an apprenticeship and is classified as a skilled worker in the trade or craft. The journey person level of competency is conferred by a labor union.
24. What is the average age of apprentices?
- » Midtwenties
25. What does the term “work experience” mean in relation to apprenticeship programs?
- » The time apprentices spend on the job under journey person supervision, learning, step by step, through demonstration and practice, the individual work processes of a chosen skilled occupation.
26. Are there age limitations to be eligible to be an apprentice?
- » Yes, you must be at least 16 years by law and for safety reasons; most programs have a lower age limit of 17 or 18. Apprenticeship programs are allowed to have a reasonable upper age limit to allow the employer or sponsor time to realize a return on their training investment, however, few programs use an upper age limit.