

# Electrical Programs

- Electrical & Electromechanical Technology

- Electrical Technician

- Industrial Maintenance

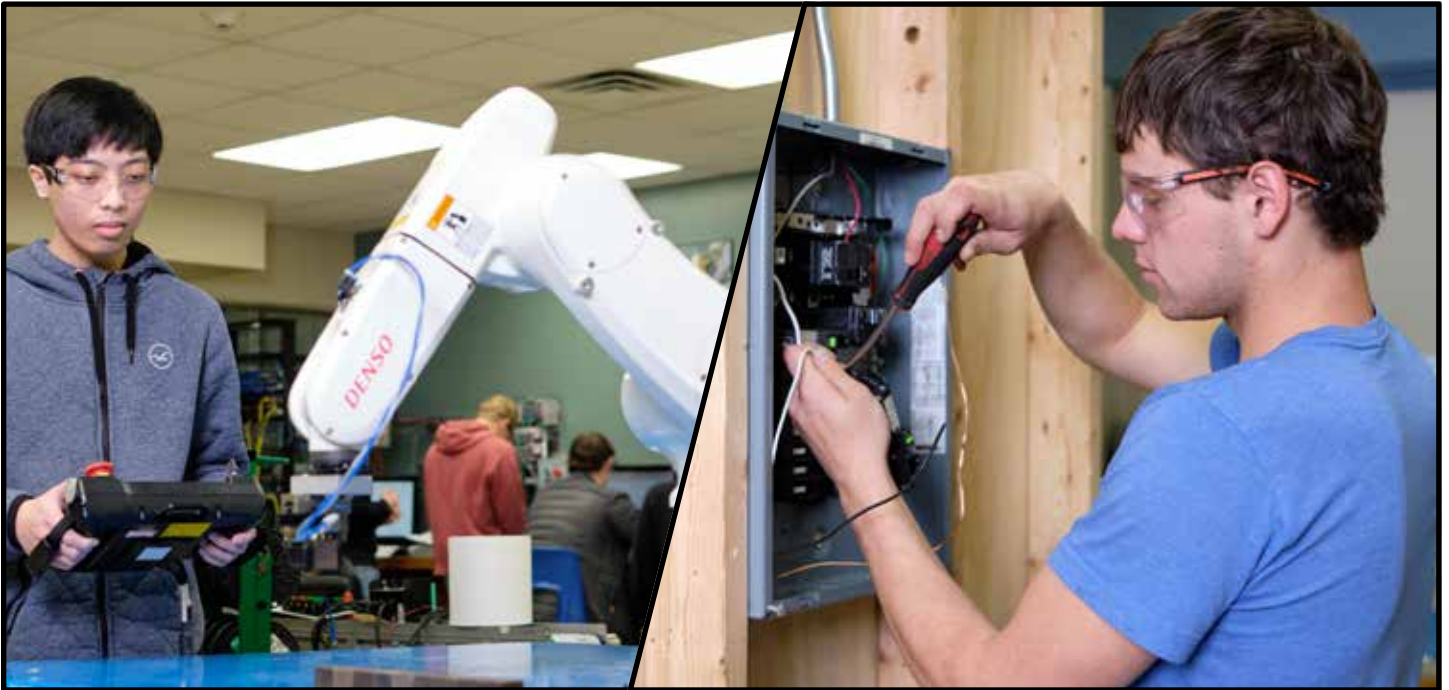
- Automation & Robotics

- Electrical Technician

- Electromechanical Maintenance Technician

- **IBEW Apprenticeship**

- Electrician Construction



Are you looking to learn about electricity, industrial circuits, design, residential and commercial installation, and troubleshooting? SCC's electrical programs prepare students for a large number of diverse careers related to electrical infrastructure installation and support in both construction and manufacturing.

The **Electrical & Electromechanical** program offers students the opportunity to learn STEM-related skills in an applied manner and use those skills to have a rewarding career in high-wage, high-skill, high-demand areas. From agriculture to zinc plating, our graduates have a role in nearly every industry, company, and product you use and/or see each day.

The Electrician Construction – **IBEW apprenticeship** program offers students the opportunity to learn with on-the-job training through the local IBEW chapter. Students complete coursework while gaining experience through five years of work experience in an electrical construction setting.

## Program Contact Information

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# The SCC Experience

- » The Electrical & Electromechanical Technology program offers three degree options: Automation & Robotics, Electrical Technician or Electromechanical Maintenance Technician, giving students the opportunity to specialize based on their interests.
- » The program is designed to help students gain experience and exposure during the first term, then deep dive into their specialization in the second semester. Our experienced faculty teach students what they need to succeed – no prior technical knowledge or experience is required to excel in this program.
- » Students will spend two-thirds of their time in the program working in the lab on real-world equipment. The program is proud of the types and amount of equipment available to students. Equipment-to-student ratio is low, allowing students the time they need to learn and apply theoretical concepts to the physical equipment they will use in industry.
- » The IBEW (apprenticeship) Electrician Construction program – is a registered apprentice program through the Department of Labor. The earn-while-you-learn model gives students the opportunity to gain 8,000 on-the-job hours of training in addition to their classroom learning.
- » Employers visit campus weekly to present career opportunities to students and showcase different segments of the workforce. The program works closely with SCC's Career Services Office to help students find jobs! Additionally, the program maintains many industry connections due to the number and quality of SCC graduates employed in related careers.

## Related Programs at SCC:

- **Building Construction Technology**
- **Design & Drafting Technology (Architectural Design focus)**
- **Electronic Systems Technology**
- **Energy Generation Operations**
- **Heating, Ventilation, Air Conditioning & Refrigeration Technology**
- **Land Surveying/GIS/Civil Engineering Technology**
- **Plumbing Technology**
- **Technical Skills Instructor**



Program	Credential	Location	Credit Hours	Tuition/Fees*	Books/ Fees/ Supplies	Tools	Total Cost*	Starting Term(s)	Number of Semesters Required - Full Time	Is Summer Term Required for Full Time?	Part-Time Option	Number of Semesters Required - Part Time	Is Summer Term Required for Part Time?	Typical Class Schedule
Electrical & Electromechanical Technology - <b>Electrical Technician</b>	Certificate	Milford	20	R - \$2,420 NR - \$2,840	\$850	\$850	R - \$4,120 NR - \$4,540	Fall	2	No	No	N/A	No	Monday-Friday, 8 a.m.-Noon
Electrical & Electromechanical Technology - <b>Industrial Maintenance</b>	Certificate	Milford	17	R - \$2,057 NR - \$2,414	\$850	\$1,050	R - \$3,957 NR - \$4,314	Fall	2	No	No	N/A	No	Monday-Friday, 8 a.m.-Noon
Electrical & Electromechanical Technology - <b>Automation &amp; Robotics</b>	Associate of Applied Science	Milford	62.5	R - \$7,563 NR - \$8,875	\$1,700	\$850	R - \$10,113 NR - \$11,425	Fall and Spring	4	No	Yes	8	No	Monday-Thursday, 8 a.m.-5 p.m. Friday, 8 a.m.-Noon
Electrical & Electromechanical Technology - <b>Electrical Technician</b>	Associate of Applied Science	Milford	63	R - \$7,623 NR - \$8,946	\$1,700	\$950	R - \$10,273 NR - \$11,596	Fall and Spring	4	No	Yes	8	No	Monday-Thursday, 8 a.m.-5 p.m. Friday, 8 a.m.-Noon
Electrical & Electromechanical Technology - <b>Electromechanical Maintenance Technician</b>	Associate of Applied Science	Milford	62	R - \$7,502 NR - \$8,804	\$1,700	\$1,250	R - \$10,452 NR - \$11,754	Fall and Spring	4	No	Yes	8	No	Monday-Thursday, 8 a.m.-5 p.m. Friday, 8 a.m.-Noon
Electrician Construction - <b>(IBEW Apprenticeship Option)</b>	Certificate	IBEW Local 265 Training Center, Lincoln	20	R - \$2,420 NR - \$2,840	\$635	\$600	R - \$3,655 NR - \$4,075	Fall	4	No	Yes	4	No	Monday and Thursday, 6-9 p.m.
Electrician Construction - <b>(IBEW Apprenticeship Option)</b>	Associate of Applied Science	IBEW Local 265 Training Center, Lincoln	65	R - \$7,865 NR - \$9,230	\$995	\$600	R - \$9,460 NR - \$10,825	Fall	5-year program with 900 hours of classroom instruction and 8,000 hours of on-the-job training.	No	Yes	10	No	Monday and Thursday, 6-9 p.m.

\*R=Resident, NR=Non-resident. Costs listed are estimates and are subject to change based on the market price of books, supplies, tools, uniforms, etc. Estimated costs also include tuition and fees. Additionally, days/times of week for class, lab, clinical/practicum are subject to change based on curriculum, facilities, instructor, and site availability. Actual program schedules will be provided prior to each enrolled term. No online option is available for this program.

Program	What do students learn in the program?	What you'll earn!	Career Opportunities	Certificate Preparation	Required Tools, Supplies, and Uniforms
Electrical & Electromechanical Technology - <b>Electrical Technician</b> (Certificate)	Students learn to install electrical systems in accordance with the National Electrical Code for residential/commercial and industrial applications. Students will learn AC and DC principles and gain practical experience with residential and commercial wiring.	Salary information not available for certificate.	Residential Apprentice Electrician • A residential installation is intended for a single-family or two-family dwelling or a multi-family residential dwelling not larger than three stories in height. Electrician	This certificate provides exposure to career skills and increases one's likelihood for being hired as an apprentice. The certificate cannot be used toward the verifiable work-related experience needed to apply to take the Nebraska State Journeyman's exam.	Tools are required. See information provided. No uniform is required for this program.
Electrical & Electromechanical Technology - <b>Industrial Maintenance</b> (Certificate)		Salary information not available for certificate.			
Electrical & Electromechanical Technology - <b>Automation &amp; Robotics</b> (Associate of Applied Science)	Students learn about AC and DC principles, transformers and three-phase systems, and programmable logic controls. Students in this focus learn about the programming and interfacing of industrial automation equipment. Students will learn to use and program programmable logic controllers, robotics, variable frequency drivers, vision systems, and other industrial devices.	\$23.55 per hour; \$48,984 annually	Automation System Technician Controls Installation Technician Controls Maintenance Technician	N/A	Tools are required. See information provided. No uniform is required for this program.
Electrical & Electromechanical Technology - <b>Electrical Technician</b> (Associate of Applied Science)	Students learn about AC and DC principles, transformers and three-phase systems, and programmable logic controls. Students in this focus learn installation of electrical systems in accordance with the National Electrical Code. Students will learn to install wiring, repair and maintain electrical motors and generators, variable speed drivers and digital control systems for fiber optics, data communication, and alarm systems.	\$20.65 per hour; \$49,952 annually	Journeyman Electrician Foreman Superintendent Estimator Project Manager Inspector Owner	Students can use their A.A.S. degree in lieu of one year of the required four years of verifiable work-related experience when applying to take the Nebraska State Journeyman's exam.	Tools are required. See information provided. No uniform is required for this program.
Electrical & Electromechanical Technology - <b>Electromechanical Maintenance Technician</b> (Associate of Applied Science)	Students learn about AC and DC principles, transformers and three-phase systems, and programmable logic controls. Students in this focus learn about the installation and maintenance of industrial machines. Students will gain skills in welding, fabrication, and wiring and installing new and existing equipment and hydraulic and pneumatic systems.	\$27.65 per hour; \$57,512 annually	Electromechanical Technician Maintenance Technician	N/A	Tools are required. See information provided. No uniform is required for this program.
Electrician Construction – <b>(IBEW Apprenticeship Option)</b> (Certificate)	Students complete 40 credit hours of theory and lab courses that teach the principles of AC and DC and electrical theory, to identify materials and tools, conduit bending, and the National Electrical Code. Students also complete four on-the-job training courses related to electrical wiring to prepare them for a career in the residential construction industry.	Salary information not available for certificate.	Construction Electrician Electrician	The certificate cannot be used toward the verifiable work-related experience needed to apply to take the Nebraska State Journeyman's exam.	Tools are required. See information provided. No uniform is required for this program.
Electrician Construction - <b>(IBEW Apprenticeship Option)</b> (Associate of Applied Science)	Students complete 40 credit hours of theory and lab courses that teach the principles of AC and DC and electrical theory, to identify materials and tools, conduit bending, and the National Electrical Code. Students also learn to read blueprints, how to install electrical hardware, cost estimation and planning, lighting fundamentals, and about motor controls. Student also complete on-the-job training in conjunction with the IBEW and general education courses to earn their Associate of Applied Science degree.	\$18.35 per hour; \$38,168 annually	Journeyman Electrician	Students will have completed all required verifiable work-related experience and be eligible to take the Nebraska State Journeyman's exam.	Tools are required. See information provided. No uniform is required for this program.

## TOOLS

Many tools are provided and students are only asked to purchase minimum tools in their first term, giving them time to explore and learn. Students then add to tools in future semesters. Tools are an investment in a student's career and SCC works with a variety of tool vendors to give students options. Many vendors offer students a significant discount. Students can also purchase tools from other vendors not associated with the College. Program faculty and advisors will provide students with specific information related to tools prior to the start of their first semester.

During the first week of each semester, tool vendors come to campus and provide students with options to buy single tools or tool sets based on program needs. Faculty will be available to help students make selections based on course and program needs.

### **Electrical & Electromechanical - Basic Tool & Supply List**

You can also pre-order tool kits from the Campus Store.

#### **1ST SEMESTER TOOLS FOR ELECTRICAL/ELECTROMECHANICAL/AUTOMATION**

- Safety glasses
- (2) Large binders
- 10 square graph paper pad
- El-506 Calculator
- USB drive 16GB
- Oscillogram paper pad

#### **ELECTRICAL**

- 3mm x 100mm screwdriver
- Wire stripper
- Multimeter (see program director)
- Phillips #2 screwdriver with 4" shank
- Standard screwdriver 3/16" x 6" shank
- 6" needle-nose pliers with plastic dipped handles
- Tool box or tool pouch with belt (optional for automation students)

- Aluminum torpedo level with magnetized strip on bottom
- Steel locking tape (3/4" x 25' minimum)
- Electricians pocket knife or utility knife
- Hammer (heavy duty curved claw)
- 10" adjustable jaw wrench (with plastic dip handles)
- 10" water pump pliers (with plastic dip handles)
- 6 3/4" diagonal cutters (with plastic dip handles)
- 9 1/4" high leverage lineman plier (with plastic dip handles)
- Standard screwdriver 5/16" blade with 6" shank
- 1/2" / 3/4" conduit reamer
- Hard sole shoes
- Hard Hat
- Architecture Ruler

#### **ELECTROMECHANICAL**

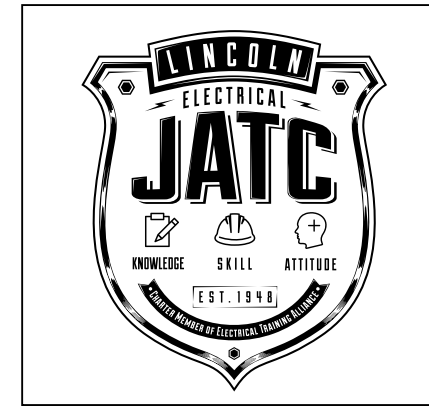
- 3mm x 100mm screwdriver
- Wire stripper
- Multimeter (see program director)
- Phillips #2 screwdriver with 4" shank
- Standard screwdriver 3/16" x 6" shank
- 6" needle-nose pliers with plastic dipped handles
- Tool box or tool pouch with belt (optional for automation students)

- Head gear (skull cap)
- Green Lens
- Arc welding helmet
- Welding gloves
- Pliers
- Chipping hammer/wire brush
- Wire cutters
- (2) F pencils
- (2) HB pencils
- Portable tool chest
- 1/2" or 3/8" socket set (1/4" through 3/4")
- 10" ratchet for the above socket set
- 5" extension for the above socket set
- 10" and 8" adjustable wrench
- 7 piece combination wrench set-standard
- Standard tip screwdriver- 5/16" with 6" shank
- Phillips screwdriver- size #1
- Locking tape (1/2" x 12' minimum)
- Hex key set (5/64" through 3/8")
- 6 3/4" slip joint pliers
- 7 3/4" curved diagonal cut pliers
- 10" locking pliers (straight or curved jaw)
- 1 1/2 lb standard deadblow hammer
- 16 oz ball peen hammer
- 5 piece punch set (1/16" through 5/32")
- Utility knife

#### **AUTOMATION**

- 3mm x 100mm screwdriver
- Wire stripper
- Multimeter (see program director)
- Phillips #2 screwdriver with 4" shank
- Standard screwdriver 3/16" x 6" shank
- 6" needle-nose pliers with plastic dipped handles
- Tool box or tool pouch with belt (optional for automation students)

- Circuit breadboard
- Standard Allen key set (1/16" through 1/4")



### **Electrician Construction - IBEW Option - Lincoln Electrical JATC Inside Apprentice Tool List**

This is the required list of tools for anyone working under the Collective Bargaining Agreement between IBEW Local #265 and the Nebraska Chapter of NECA.

The following is taken from the Collective Bargaining Agreement: Section 3.13:

"(a) All Employees covered by this agreement shall provide themselves with and keep in first class condition, a suitable toolbox equipped with a lock in good working order and a kit of tools consisting of:

- |  |  |   |
|--|--|---|
| 1) 2 Pair Channel Lock Pliers (or equivalent) *                                | 7) Knife (utility or equivalent) *                             | 14) Voltage Tester for Nominal Voltages |
| 2) Assortment of Screwdrivers; Med. Straight, Large Straight, and #2 Phillips* | 8) Level, not over 18" in length *                             | 15) 7 Piece Nut Driver Set              |
| 3) Diagonal Cutting Pliers *   | 9) Long or Needle Nose Pliers *                                | 16) Set of Allen Wrenches               |
| 4) Claw Hammer *   | 10) EMT Reamer; 1/2", 3/4", and 1"                             | 17) Plumb Bob                           |
| 5) Hacksaw Frame *   | 11) Adjustable Wrench or Combination Wrench Kit; 1/4" to 9/16" | 18) Chalk Line                          |
| 6) 6' Wood Ruler and/or Tape measure (16' minimum) *                           | 12) Small Steel Drill Bits, not over 1/4"                      | 19) Flashlight                          |
|  | 13) Tap Wrenches, 6/32, 8/32, 10/24, 10/32, and 1/4 x 20       | 20) Wire Strippers                      |
|  |  | 21) Scratch Awl                         |
|  |  | 22) Wire Crimping Tool                  |

Note those tools marked with an asterisk (\*) are to be obtained before your first day of employment

Employees may carry additional small hand tools. The employer can inspect tools before the employee is put to work or at any reasonable time. A representative of the Local Union may also inspect the employee's tools at any reasonable time. The employer shall replace any or all of the above tools for losses due to theft, provided the tools are put away in the workman's own toolbox, secured with a lock and placed in a safe storage area provided by the Employer at the end of the work period. It will be the responsibility of the Employer to see that the apprentice has provided a suitable storage area.

Section 3.14: The Employer shall furnish all other necessary tools or equipment, including all necessary and/or required safety equipment and apparel. Other tools may be needed to perform in a workman-like manner. Apprentices must realize that it is not journeyman's obligation to furnish tools regularly needed by the apprentice in order to carry their share of the job progress. Apprentices will be expected to furnish their own transportation; that is, capable of getting themselves and their personal tools to work and class before the assigned starting time".

Lincoln Electrical JATC | 1415 Old Farm Road | Lincoln, NE 68512  
Phone: 402-423-4519 | Fax: 402-423-4506 | <http://lincolnelectricaljatc.org/roy.lamb@ibew265.org> | Mon-Fri | 8 a.m. - 4:30 p.m. (or by appointment)

# Personality + Career



Students in SCC's Electrical & Electromechanical and Electrician Construction – IBEW programs enjoy working with their hands, like technology and are good problem solvers. They see their work in very tangible ways and enjoy seeing direct results in a finished project. The desire to be physically active on the job is important, too.



Scan this code to access the **Electrical & Electromechanical course listing**



Scan this code to access the **IBEW course listing**

For members of the International Brotherhood of Electrical Workers (IBEW - Local 265), the curriculum is provided with the cooperation of representatives of SCC and Nebraska representatives of the International Brotherhood of Electrical Workers, IBEW-Local 265. Applicants must meet the stated SCC and IBEW-Local 265 entrance requirements to be accepted into the program.

The curriculum is normally delivered over a five-year period. Classes are held at the IBEW Training Center, 6200 S. 14th St. in Lincoln. Prepares students for a career in the commercial and residential electrical construction industry.

## » Your Next Steps to Choose SCC

- ▶ Schedule a Campus Visit - [southeast.edu/visit](https://southeast.edu/visit)
- ▶ Explore career options with an Admissions Counselor - [southeast.edu/admissionsadvising](https://southeast.edu/admissionsadvising)
- ▶ Apply - [southeast.edu/applynow](https://southeast.edu/applynow)

## » Paying for SCC

- ▶ Free Application for Federal Student Aid (FAFSA) - [studentaid.gov/h/apply-for-aid/fafsa](https://studentaid.gov/h/apply-for-aid/fafsa)
- ▶ Scholarships - [southeast.edu/scholarships](https://southeast.edu/scholarships)
- ▶ Payment Plan - [mycollegepaymentplan.com/southeast](https://mycollegepaymentplan.com/southeast)
- ▶ Veteran Education Benefits - [southeast.edu/veterans-services](https://southeast.edu/veterans-services)
- ▶ GAP Assistance Program - [southeast.edu/gap](https://southeast.edu/gap)
- ▶ Children of State Teammate Tuition Reimbursement Program - [southeast.edu/children-of-state-teammate-tuition-reimbursement-program](https://southeast.edu/children-of-state-teammate-tuition-reimbursement-program)

**Contact Admissions to get started!**

402-437-2600, 800-642-4075 ext. 2600

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