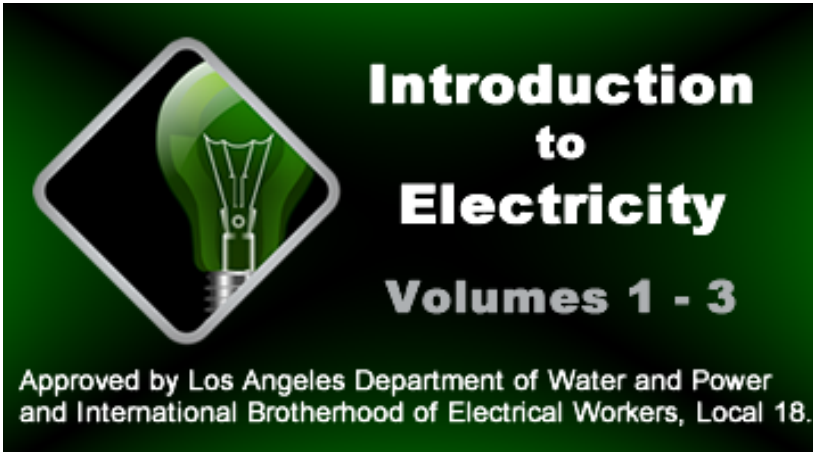


Introduction to Electricity Volumes 1, 2, & 3

has been approved by The Los Angeles Department of Water and Power and the International Brotherhood of Electrical Workers, Local 18, as an equivalent to the **Hayden Electrical Course**.



Course Content

This course is designed to teach the fundamentals of electricity, including electrical safety, the basic principles of atomic structure, electrical quantities, static electricity, magnetism, induction, resistors, series circuits, parallel circuits, and combination circuits. Resistive circuits will be analyzed using Ohm's Law, The Power Equation and Kirchhoff's Voltage and Current Laws. In addition, the course offers a study in operating principles of electrical power systems, the theory of AC generators and motors, load calculations, efficiencies, power factor correction, and calculations related to these theories.

Course Structure, Duration, and Time

The course contains 16 Modules divided into three Volumes. Students are given a target of six weeks to complete each volume. This course is self-paced and delivered online. Participants view recorded multimedia lectures and tutorials, and complete Knowledge Checks to assess whether they have mastered the material sufficiently to take the Module Quizzes.

About this Course

This self-paced online course will introduce basic electrical concepts including charge, voltage, current, energy and power. The class is free and open to anyone interested in pursuing a career in various electrical trades. Taking the course will also help participants to meet minimum requirements to apply for several positions at the Los Angeles Department of Water and Power (LADWP).

For more information on these positions:

1. Visit <https://per.lacity.org/jobs.cfm>
2. Scroll down and click **EXAM NOTIFICATION/PAST BULLETINS**
3. In the search bar, type **Hayden**.

For more information on a career with LADWP:

- **Direct Link:** [LADWPCareers](http://www.ladwp.com)
- **Navigate:** Visit <http://www.ladwp.com>, & then at the bottom of the page, click **Careers**.

Course Registration

Register for class via Eventbrite at:

<https://bit.ly/2Ntnlgc>

Outline

Volume 1

1. Safety
2. Atomic Structure
3. Electrical Quantities and Ohm's Law
4. Static Electricity
5. Magnetism
6. Electromagnetism

Volume 2

7. Resistors
8. Series Circuits
9. Parallel Circuits
10. Combination Circuits

Volume 3

11. Mathematics & Electricity
12. Inductance in AC Circuits
13. AC Resistive-Capacitive Series & Parallel Circuits
14. AC Resistive-Inductive-Capacitive Circuits
15. AC Single-Phase Transformers
16. Three-Phase Circuits



Intro to Electricity FAQ

Registration & Enrollment

1. Q: How much does it cost?

A: The course is free to students. But there is an optional text book you would buy on your own if you decide you would like to use it.

2. Q: What happens after I register on Eventbrite?

A: You will receive an email message within 5 business days, providing a username (student ID) and password, as well as instructions on accessing the course in the Canvas Learning Management System.

All of your **Intro to Electricity** course records will be tied to that ID number, so please provide it whenever communicating with the staff about the course, otherwise it will be difficult to access your info or troubleshoot problems.

You will be enrolled in volumes 1, 2, and 3 of the course at the same time. But you must pass each module test and volume exam with a score of 80% or higher to unlock subsequent sections. **Note: This is not an average of 80%, it is a minimum score of 80% on each assessment.**

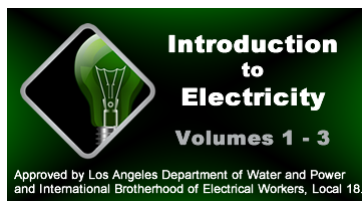
3. Q: How much is the textbook, and where can I purchase it?

A: This course was created using as a reference **Delmar's Standard Book of Electricity**.

Though *the textbook is optional*, it might be beneficial to have a copy on-hand to enhance your understanding of the topics. It is available at the **LATTC bookstore**, as well as **online vendors** such as Amazon.com in both hardcopy and Kindle format.

Text Sources:

- [Amazon: \\$25-\\$150](#)
- [Chegg Books: \\$25-\\$140](#)
- [Thrift Books: \\$4.78-\\$42.29](#)



4. Q: Is there a limit on the number of students that can be enrolled at one time?

A: There is no limit on the number of students that can be enrolled.

5. Q: I haven't received an email after registering, who can I contact?

A: You can reach the TWI office at twi@lattc.edu for all registration questions.

In the Course

General Help & Contact Instructions

6. Q: Who do I contact if I have any questions on the course? If I have a technical issue?

A: Contact the **TWI** staff via email at twi@lattc.edu. You should receive a response within 2 business days.

For all inquiries, please **provide your name and your Canvas Student ID** to help us source your information.

In your email, please include a description of the issue you are having. **Tell us specifically what you were doing, what you expected to happen, and what actually happened.**

For example:

Don't say: "I was taking a quiz, but it stopped working."

Be specific and say: "I was taking the Module 02 - Final Quiz when my computer froze. I restarted, and tried to open the quiz again, but I get a message saying I have no more attempts left."

7. Q: How do I access Volume 2 & Volume 3?

A: The content of each volume is contained in separate Canvas shells. You will not be able to unlock the content of a volume until you pass the previous volume.

For example: After passing the final exam for Volume 1, you will mark yourself complete inside the Canvas shell and be given a code that will allow you to unlock the first module of Volume 2.

Intro to Electricity FAQ

8. Q: Is there tutoring available?

A: Tutoring will be available. See the online course information page for available days and hours.

Timelines

9. Q: How long can I take to complete the course?

A: The course (Volume 1 -3) should take approximately 18 – 24 weeks. However, accommodations can be made if more time is needed.

10. Q: How long do I have to complete each volume?

A: Each volume should take ideally approximately 6-8 weeks to complete. Milestones are in place to provide support along the way. Accommodations can be made if more time is needed to successfully complete each volume.

Testing

11. Q: How many times can I retake the exam for each Module?

A: Each exam allows 3 tries to pass. However, you can reach out to the TWI office to get an additional try. Email the TWI staff at twi@lattc.edu.

There are also short "Knowledge Check" quizzes you can take as many times as you like.

Passing criteria for each exam is 80%.

12. Q: What's considered a passing score?

A: You must obtain an 80% or higher on the module and volume exams to pass.

After the Course

Certificates

13. Q: When completed, do I receive a certificate?

A: Paper or digital certificate? Each student will be emailed a certificate in a PDF format after successfully completing all three volumes. The student can print the certificate if needed.

14. Q: How long after completing the course will I receive a certificate?

A: You should expect your certificate to be emailed to you in a PDF format within 5 business days of completing the course (all three volumes).

15. Q: How will City Personnel verify my completion of the course?

A: Students will receive a Certificate of Completion and LADWP and other agencies will be provided access to the completion database for verification.

Job Opportunities

16. Q: Does passing this course guarantee a job with the City of Los Angeles?

A: No. Receiving a certificate of completion from this course may fulfill some or all of the prerequisite requirements for applying for specific jobs with the City of Los Angeles.

For more information on these positions:

1. Visit <https://per.lacity.org/jobs.cfm>
2. Scroll down and click **EXAM NOTIFICATION/PAST BULLETINS**.
3. In the **Search Bar** type "Hayden."

Please note that the City of Los Angeles Personnel Department may at times limit the number of applicants to be examined according to hiring department vacancies and number of applications received.

17. Q: Does passing this course provide opportunities with other cities or utilities?

A: Students should confirm with each potential employer whether the course meets their requirements. The certificate indicates that the course is a "Hayden equivalent", which should be mentioned during the inquiry.