

TEEL 1120 - Electrician Apprentice IB (3 Credits)

Course Description

The Electrician Apprentice IB course continues the study of electrical theory and its application within the electrical field. In this course, students will learn how devices and electrical systems work. Students will also explore lock out tag out, learn what makes a qualified person, and become more familiar with the National Electrical Code (NEC).

Course Objectives

- Apply the fundamentals of electrical theory.
- Apply the fundamentals of electrical circuitry.
- Explain the definition of a qualified person.
- Explain responsibilities and risks of qualified persons.
- Demonstrate principles and procedures of lock out tag out.
- Demonstrate the application of the National Electrical Code (NEC) Articles 300-450.
- Demonstrate how to navigate the National Electrical Code (NEC) Articles 300-450.

Course Outline

- Year IB

Textbook & Reading Materials

Illustrated Guide to the National Electrical Code 2020, Charles Miller, ISBN: 9780357766712

Electrical Wiring Residential 21st Edition, Mullin/Simmons/Vigstol, ISBN: 9798214122823

NFPA 70: NEC National Electrical Code 2023, National Fire Protection Association (NFPA), ISBN: 9781455929320

Ugly's Electrical References, 2023 Edition, Charles R Miller, ISBN: 9781284275914

Assignments and Assessments

Orientation

UNIT 6 Series Circuits

Reading

DEL Unit 6 Series Circuits Due 1-22-24

UNIT 7 Parallel Circuits

Reading

DEL 7 Parallel Circuits Due 1-22-24

UNIT 8 Combination Circuits

Reading

DEL Unit 8 Combination Circuits Due 1-29-24

Unit 3. Boxes and Enclosures

IGNEC Unit 3 Boxes and Enclosures 2-5-24

Unit 4. Cables

IGNEC Unit 4 Cables 2-5-24

Unit 5. Raceways and Conductors

IGNEC Unit 5 Raceways and Conductors 2-12-24

Switch Lab

Chapter 13. Lighting Branch Circuit for the Living Room

EWR Chapter 13 Lighting Branch Circuit for the Living Room
Due 2-12-24

Chapter 14. Lighting Branch Circuit for the Study/Bedroom

EWR Chapter 14 Lighting Branch Circuit for Study/Bedroom
Due 2-12-24

Chapter 15. Dryer Outlet, Lighting, and Receptacle Circuits
for the Laundry, Powder Room, Rear Entry Hall, and Attic

EWR Chapter 15 Dryer Outlet, Lighting and Receptacle
Circuits for the Laundry Room,
Powder Room, Rear Entry Hall, and Attic Due 2-26-24

Chapter 16. Branch Circuits for the Garage and Outdoors

EWR Chapter 16 Branch Circuit for the Garage and Outdoors
Due 2-26-24

Chapter 17. Recreation Room

EWR Chapter 17 Recreation Room Due 2-26-24

Midterm Practice Exam

Midterm Exam

Chapter 18. Lighting Branch Circuit, Receptacle Circuits for
Workshop

EWR Chapter 18 Lighting Branch Circuit, Receptacle Circuits
for Workshop Due 3-18-24

Chapter 19. Special-Purpose Outlets-Water Pump, Water
Heater

EWR Chapter 19 Special-Purpose Outlets-Water Pump, Water
Heater Due 3-18-24

Chapter 20. Special-Purpose Outlets for Ranges, Counter-
Mounted Cooking Unit, and Wall-Mounted Oven

EWR Chapter 20 Special-Purpose Outlets for Ranges,
Counter-Mounted Cooking Unit, and Wall-Mounted Oven Due
3-18-24

Chapter 21. Special-Purpose Outlets-Food Waste Disposer,
Dishwasher

EWR Chapter 21 Special-Purpose Outlets-Food Waste

Disposer, Dishwasher Due 3-25-24

Electrical Safety Chapter 2 - Electrical Safety OSHA and
NFPA 70E.pdf

Electrical Safety: OSHA and NFPA 70E Ch 2 Due 3-25-24

Lock-Out, Tag-Out Quiz

Lock-Out, Tag-Out Lab

Chapter 22. Special-Purpose Outlets for the Bathroom Ceiling
Heat/Vent/Lights, the Attic

Fan, and the Hydromassage Tub

EWR Chapter 22 Special-Purpose Outlets for Bathroom
Ceiling Heat/Vent/Lights, the

Attic Fan, and the Hydromassage Tub Due 4-8-24

Chapter 23. Special-Purpose Outlets-Electric Heating, Air
Conditioning

EWR Chapter 23 Special-Purpose Outlets-Electric Heating, Air
Conditioning Due 4-15-24

Chapter 28. Installing Feeders and Service-Entrance
Equipment - Grounding and Bonding

EWR Chapter 28 Installing Feeders and Service-Entrance
Equipment Due 4-22-24

Final Practice Exam

ELEC 001B Final Exam

Final Exam 2

End of Course Survey

1_found_base_plan.pdf

2_first_floor plan.pdf

3_south_elev wind_door _sch.pdf

4_ east_ elev int_ elev.pdf

S_north_elev_plot_plan.pdf

6 _ west_ elev_ elec_sch.pdf

7 _cross_section_a-a.pdf

8_basement_elec_plan.pdf

9 _first_floor elec_plan.pdf

basement_electrical.pdf

first_floor _electrical.pdf

*Subject to change. Please consult your Canvas course for the most
current instructions and updates.*

Classroom Hours

Start: 1-5-2026
End: 4-30-2026

Mo, Th
6:00 PM - 9:00 PM

For a full list of course hours visit: [Course Schedule](#)

Instructor Contact Information

Cody Post – cpost@stech.edu

Office Hours: By appointment

Email is the preferred method of communication; you will receive a response within 24 hours during regular business hours.

Canvas Information

Canvas is the where course content, grades, and communication will reside for this course.

- [stech.instructure.com](#)
 - For Canvas passwords or any other computer-related technical support contact Student Services.
 - For regular Hours and Weekdays call (435) 586 - 2899.
 - For after Hours & Weekends call (435) 865 - 3929 (Leave a message if no response).
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Course Policies

Course Grading: You will also be required to complete the course, exams and homework, with 75% or higher accuracy for credit and DOPL licensure points.

High School Power School Grades: Quarter student grades will be determined by student progress percentage. Faculty will use the higher percentage of either 1) quarter progress, or 2) cumulative progress for the current training plan year.

Grade Scale: The following grading scale will be used to determine a letter grade.

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|-----------------|-----------------|-----------------|-----------------|
| • A : 94 - 100% | • B : 83 - 86% | • C : 73 - 76% | • D : 63 - 66% |
| • A- : 90 - 93% | • B- : 80 - 82% | • C- : 70 - 72% | • D- : 60 - 62% |
| • B+ : 87 - 89% | • C+ : 77 - 79% | • D+ : 67 - 69% | • F : 0 - 59% |

Course Policies: Cell phones for many have become a distraction. When you are in class or lab we encourage you to keep your cell phones put away in a secure location. If you use ear buds we ask that you only use one so you can still hear the things going on around you. If you are using your phone for things other than school related items, instructors will ask you to put them away. Please follow the direction of your instructors. Those who have been asked to refrain from using your cell phone and fail to do so will be asked to meet with the Director of Transportation, and student services will be notified.

Additional Information

InformaCast Statement: Southwest Tech uses InformaCast to ensure the safety and well-being of our students. In times of emergency, such as weather closures and delays, this app allows us to promptly deliver notifications directly to your mobile devices. To stay informed and receive real-time updates, we encourage all students to sign up for notifications. Your safety is our priority, and staying connected ensures a swift response to any unforeseen circumstances. More information and directions for signing up are available at: <https://stech.edu/emergency-notifications/>

Internet Acceptable Use Policy: The student is expected to review and follow the Southwest Technical College Internet Safety Policy at: <https://stech.edu/students/policies/>

Student Code of Conduct Policy: The student is expected to review and follow the Southwest Technical College Student Code of Conduct Policy at: <https://stech.edu/students/policies/>

Accommodations: Students with medical, psychological, learning, or other disabilities desiring accommodations or services under ADA, must contact the Student Services Office. Student Services determines eligibility for and authorizes the provision of these accommodations and services. Students must voluntarily disclose that they have a disability, request an accommodation, and provide documentation of their disability. Students with disabilities may apply for accommodations, based on an eligible disability, through the Student Services office located at 757 W. 800 S., Cedar City, UT 84720, and by phone at (435) 586-2899. No diagnostic services are currently available through Southwest Technical College.

Safety and Building Maintenance: The College has developed and follows a variety of plans to ensure the safe and effective operation of its facilities and programs. The following plans are available online:

1) Facilities Operations and Maintenance Plan; 2) Technical Infrastructure Plan; and 3) Health and Safety Plan.

Withdrawals and Refunds: Please refer to the Southwest Technical College Refund Policy at: <https://stech.edu/students/policies/>

Any high school or adult student, who declares a technical training objective is eligible for admission at Southwest Technical College (Southwest Tech). Program-specific admissions requirements may exist and will be listed on the Southwest Tech website. A high school diploma or equivalent is not required for admission but is mandatory for students seeking Title IV Federal Financial Aid.

Non-Discriminatory Policy: Southwest Technical College affirms its commitment to promote the goals of fairness and equity in all aspects of the educational enterprise, and bases its policies on the idea of global human dignity.

Southwest Tech is committed to a policy of nondiscrimination. No otherwise qualified person may be excluded from participation in or be subjected to discrimination in any course, program or activity because of race, age, color, religion, sex, pregnancy, national origin or disability. Southwest Technical College does not discriminate on the basis of sex in the education programs or activities that it operates, as required by Title IX and 34 CFR part 106. The requirement not to discriminate in education programs or activities extends to admission and employment. Inquiries about Title IX and its regulations to STECH may be referred to the Title IX Coordinator, to the Department of Education, and/or to the Office for Civil rights.

If you believe you have experienced discrimination or harassment on our campus, please contact the Title IX Coordinator, Cory Estes: cestes@stech.edu, (435) 865-3938.

For special accommodations, please contact the ADA Coordinator, Cyndie Tracy: ctracy@stech.edu, (435) 865-3944.

Southwest Technical College

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