



Welcome to WECA-IEC's 1-Hour Online Courses Program Guide

Electrician Trainees (ETs) enrolled with WECA-IEC may take these online courses as part of the Electrician Trainee program and use the hours earned to *supplement your 150 hours of instruction required each year by the State of California.*

Certified Journeymen may take these online courses and use the hours earned toward fulfilling the 32 *Continuing Education Hours (CEHs) required to maintain your State Certification.*

Added benefits for you:

- **Flexibility:** Sign up for a class and take it when it fits your schedule.
- **Convenience:** Complete a class anywhere you have high-speed DSL or cable internet access.
- **Affordability:** Courses cost only \$25 each.
- **Variety:** Over 150 courses on a wide range of topics including industry-related and industry-specific topics, as well as general topics not covered by our classroom programs, such as human resources and management training.

Sign-Up:

- You can sign up for online courses exactly as you would for WECA-IEC classroom courses.
- Electrician Trainees are required to sign up for a **minimum** of five (5) courses when signing up for online classes.
- Once sign up is complete, you will receive a confirmation notice and a password via U.S. Mail. Once this is received, you may log on and take the courses online.
- Each online course is designed to be taken step-by-step in its entirety. **Warning: Going directly to the test puts you at risk of freezing the course and being unable to complete or get credit for the course and an additional course fee will apply.**

Internet Requirements: You need access to DSL or a higher type of high-speed Internet connection to take an online course. Dial-up services are too slow for the streaming format and speed required to deliver the content of each course to you. **Pop-ups must be turned off** while taking the course.

Questions? Please call WECA-IEC toll free at (877) 444-9322 extension 141 or 116.

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
AC/DC Theory: AC Measurement	1013
AC/DC Theory: Alternating Current	1012
AC/DC Theory: Capacitive Circuits	1014
AC/DC Theory: Current	1004
AC/DC Theory: DC Circuits	1010

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
AC/DC Theory: Electrical Measurement	1009
AC/DC Theory: Inductance and Capacitance	1011
AC/DC Theory: Inductive Circuits	1015
AC/DC Theory: Magnetism	1008
AC/DC Theory: Ohm's Law	1007
AC/DC Theory: Resistance	1006
AC/DC Theory: Transformers	1016
AC/DC Theory: Tuned Circuits	1017
AC/DC Theory: Voltage	1005
Accident Investigation	987
Aerial Lifts	970
Applied DC Fundamentals: Electronic Components and Magnetism	1020
Applied DC Fundamentals: Electronic Schematics and Circuit Analysis	1021
Applied DC Fundamentals: Ohm's Law and DC Circuits	1019
Applied DC Fundamentals: Voltage, Resistance and Current	1018
Arc Flash Safety Awareness	3730
Asbestos in Construction	968
Back Safety	960
Basic Electronic Components & their Measurement: Controls and Application	1023
Basic Electronic Components & their Measurement: Operation and Troubleshooting	1024
Basic Electronic Components & their Measurement: Types and Diagrams	1022
Basic Machine Technology: Hand Tools and Their Use	1002
Basic Machine Technology: Sharpening Drill Bits by Hand and by Machine	1003
Basic Process Control: Electrical Connections	3755
Basic Process Control: Feedback Control	3741
Basic Process Control: Instrument Loop Diagrams	3752
Basic Process Control: Instrumentation Symbols	3751
Basic Process Control: Mechanical Connections	3754
Basic Process Control: Piping Instrumentation Diagrams	3753

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
Basic Process Control: Process Characteristics	3743
Basic Process Control: Process Control Modes	3742
Basic Process Control: Process Variables	3750
Bloodborne Pathogens	958
Calibration & Test Equipment: Electronic Test Equipment	3763
Calibration & Test Equipment: Instrument Calibration	3767
Calibration & Test Equipment: Instrumentation Errors	3766
Calibration & Test Equipment: Oscilloscopes	3765
Calibration & Test Equipment: Pneumatic Test Equipment	3762
Calibration & Test Equipment: Primary Calibration Standards	3760
Continuous Process Control: Application of Distillation Control	3778
Continuous Process Control: Applications of Heat Exchanger Control	3777
Continuous Process Control: Applications of pH Control	3779
Continuous Process Control: Principles of Continuous Control	3776
Control Values & Actuators: Basics, Selection and Function	3736
Control Values & Actuators: Fundamentals and Selection	3739
Control Values & Actuators: Sizing and Installation	3740
Control Values & Actuators: Types and Design	3738
DC Motor Controllers: Controller Function and Operation	1027
DC Motor Controllers: Maintenance and Troubleshooting	1028
DC Motors: Basics and Internal Parts	1025
DC Motors: Wiring Diagrams and Troubleshooting	1026
Defensive Driving	971
Defusing Workplace Violence	991
Electric Power Generation	963
Electrical Safety	964
Electrical Safety for the Qualified Worker	965
Electronic Circuits: Basic Principles	1029
Electronic Circuits: Characteristics and Operations	1030

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
Electronic Circuits: Logic Fundamentals, Types and Application	1031
Electronic Maintenance: Controllers, Indicators and Recorders	3786
Electronic Maintenance: Electrochemical Analyzers	3791
Electronic Maintenance: Gas Chromatograph Ovens and Controllers	3789
Electronic Maintenance: Instrument Loop Troubleshooting	3792
Electronic Maintenance: Integrated Circuits and Op Amps	3782
Electronic Maintenance: Sampling Systems and Gas Chromatograph Valves	3788
Electronic Maintenance: Sensor and Transducer Principles	3783
Electronic Maintenance: Solid State Devices	3780
Electronic Maintenance: Spectroscopic Analyzers	3790
Electronic Maintenance: Transducers	3785
Electronic Maintenance: Transmitters	3784
Electronic Maintenance: Tuning	3787
Eye Protection: See the Whole Picture	3828
Fire Safety	3827
First Aid: Prepared to Help	959
Forklift Certification	972
Forklift Safety	973
Hazard Communication: Identifying the Dangers	969
Hearing Protection	976
Hearing Protection: It Makes Sense	977
Indoor Cranes	974
Industrial Electricity: AC Motor Control and Current Measurement	1038
Industrial Electricity: Alternating Current	1033
Industrial Electricity: Basic Principles	1032
Industrial Electricity: Conductors	1034
Industrial Electricity: Generators and Motors	1037
Industrial Electricity: Installation, Distribution and Lighting	1036
Industrial Electricity: Wiring	1035

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
Job Safety Analysis: Pro-Active Planning	988
Ladder Safety	978
Lockout/Tagout: Controlling the Beast	967
Lockout/Tagout (2hours)	966
Maintenance Troubleshooting: Motors and Motor Controls	3735
Managing Workplace Conflict (Employee)	1081
Mechanical Electrical Control Systems: Creating Schematics	1040
Mechanical Electrical Control Systems: Design and Troubleshooting	1042
Mechanical Electrical Control Systems: Electrical Lockout	1041
Mechanical Electrical Control Systems: Electronic Controls	1044
Mechanical Electrical Control Systems: Energy Management	1043
Mechanical Electrical Control Systems: Introduction to Control Schematics	1039
Mechanical Electrical Control Systems: Responsive Systems	1045
Motor Controls: Basic Motor Controls and Relays	1046
Motor Controls: Installing and Troubleshooting Control Systems	1053
Motor Controls: Overload Relays	1047
Motor Controls: Schematic Symbols	1049
Motor Controls: Schematics and Wiring Diagrams	1050
Motor Controls: Starting Methods for Squirrel Cage Motors	1051
Motor Controls: Time Delay Relays	1048
Motor Controls: Wye-Delta, Synchronous and Wound Rotor Controls	1052
Motor Drives: AC Drive Selection and Setup	1059
Motor Drives: AC Motor Operation	1058
Motor Drives: Motor Drive Identification	1054
Motor Drives: Open and Closed Loop Systems	1055
Motor Drives: Servo and Stepper Motors	1057
Motor Drives: Variable Speed AC Drives	1056
OSHA: An Introduction	961
OSHA: An Introduction for Construction	962

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125	Class ID
Personal Fall Protection	981
Personal Fall Protection: One Step Beyond	982
Personal Protective Equipment	979
Personal Protective Equipment: Don't Start Work Without It	980
Preventing Harassment in the Workplace: For Employees	992
Preventing Harassment in the Workplace: For Managers	989
Process Measurement: Flow 1: Flow Measurement and Overview	3774
Process Measurement: Flow 2: Flow Sensors	3775
Process Measurement: Level 1: Level Measurement and Gages	3772
Process Measurement: Level 2: Level Indicators and Transmitters	3773
Process Measurement: Pressure 1: Manometers and Gages	3770
Process Measurement: Pressure 2: Indicators and Transmitters	3771
Process Measurement: Temperature 1: Thermometers and Thermocouples	3768
Process Measurement: Temperature 2: Resistance and Radiation Devices	3769
Programmable Logic Controllers: Communications and Advanced Programming	1064
Programmable Logic Controllers: Fundamentals	1060
Programmable Logic Controllers: Inputs and Outputs	1062
Programmable Logic Controllers: Programming	1061
Programmable Logic Controllers: Troubleshooting	1063
Respiratory Protection	983
Rigging: Equipment Basics	994
Rigging: Operations	995
Scaffold Safety	984
Smart Digital Instrumentation: Applications of HART Smart Field Device	3757
Smart Digital Instrumentation: Configuring, Calibrating and Testing HART Smart Field Devices	3758
Smart Digital Instrumentation: FOUNDATION Fieldbus	3759
Smart Digital Instrumentation: Understanding HART Protocol	3756
Stairways and Ladders	985
Stopping Sexual Harassment: Guideline for Employees	993

Online Courses - Each course fee is \$25 and must be purchased as a bundle of 5 courses = \$125		Class ID
Stopping Sexual Harassment: Guideline for Supervisors		990
Trenching & Shoring		3733
Using RSLogix: Configuring Hardware and Software		1065
Using RSLogix: Programming and Editing		1066
Using RSLogix: Testing and Troubleshooting		1067
Walking and Working Surfaces		986
Walking Safely with Power Tools		3683
Workplace Mathematics: Decimals		997
Workplace Mathematics: Fractions		998
Workplace Mathematics: Introduction to Algebra		996
Workplace Mathematics: Whole Numbers		999
Workplace Reading: Basic Skills		1000
Workplace Reading: Study Skills		1001
Cursos en Español - La cuota de cada curso es de \$25 y se tienen que comprar en un paquete de 5 cursos = \$125		
Bloqueo/Etiquetado (Lockout/Tagout)		1074
Conocimiento del Asbestos (Asbestos Awareness)		1076
Cuide La Espalda (Back Safety)		1072
Entrada a Espacios Confinados (Confined Space Entry)		3857
Equipos de Protección Personal (Personal Protective Equipment)		3852
Grúas de interior (Indoor Cranes)		3854
La Comunicacion de Peligros: Identificand el Peligro (Hazard Communication: Identifying the Dangers)		1077
Los Patogenos de la Sangre (Bloodborne Pathogens)		1068
Orientacion Sobre la Seguridad (Safety Orientation)		1071
Primeros Auxilios Industriales (First Aid)		1070
Protección Contra Caída (Fall Protection)		3856
Seguridad con el Fuego (Fire Safety)		1069
Seguridad Electrica (Electrical Safety)		1073
Zanjas y Apuntalamiento (Trenching and Shoring)		1075